

Chapter 1. AP-5004 Overview

AP-5004 is a rugged mobile DVR dedicated to vehicle applications. There are many factors that need to be taken into consideration when installing mobile DVRs on a vehicle.

1. Power – The power source of a mobile DVR comes from batteries on the vehicles. But the voltage varies widely among different vehicle models and the surge of voltage caused by the engine ignition is really dangerous. The mobile DVR needs to have protection against this.
2. Heat – The difference of temperature in a vehicle also varies widely. Depending on the installation area, the temperature may vary from below zero at winter to as high as more than 60 degree C at summer time. Because of this condition, the mobile DVR needs to be able to work at wide temperature range.
3. Vibration – The mechanical structure of mobile DVR needs to endure the shock and vibration forces generated when the vehicle is moving. Different vehicles and the smoothness of the road can be a deciding factor.
4. Communication – It is difficult to have stable and high speed communication link between the vehicle and control center. This is important for emergency event handling. The mobile DVR needs to have the capability of communication with control center through GPRS, 3G, Wi-Fi or even satellite.
5. GPS tracking – It is also very important for the control center to know the location of vehicles with e-Map indication. This is helpful for event tracking, emergency rescue, or vehicle fleet management.

AP-5004 is designed to meet all the special requirements that we've just listed. Please refer to the features and specification below for more details.

1.1 Features:

Power -

Input voltage – 9V to 32V DC

Power consumption – 15W

Power-on delay at the engine ignition and a power-off delay at engine shutdown.

Optional external 12V / 2A box with input voltage regulation to power the cameras.

Heat Dissipation -

Heat dissipation through entire case, NO fan needed.

Operation temperature: -10 to + 60 degree C.

Vibration resistance

5 – 500 Hz vibration at 2.18G

Support 2.5" SSD for video data storage

MIL-STD-810F-514.5.C3 certified

Mechanical –

Size - 240mm*160mm*65mm

Weight – 3 Kg.

Wireless Support –

2.5G (GPRS) / 2.75G (EDGE) / 3G (UTMS) / 3.5G (HSDPA) / 3.75G (HSUPA) / Wi-Fi / GPS integration. Send SMS when alarm

Central Monitoring System Integration -

SecuTrack CMS can monitor up to 500 vehicles by 64 per group

Remote Live View

Remote Playback

GPS tracking with e-Map support

Two-way audio communication between CMS & the AP-5004 on the vehicle.

Video Quality –

720x480 @ 60 fps

360x240 @ 120 fps

MPEG4 compression

Dual stream support for different video quality / FPS at the local recording and remote transmission operation.

Firmware version – MDVR 2.0**1.2 Front panel**

Fig. 1-1

1.3 Back panel

Fig. 1-2

2. Installation

Please refer to the wiring diagram of Fig. 1-3. Standard delivery of AP-5004 package include The machine itself , 1*AV cable , 1*IO cable and 1*manual CD. There is no hard disk included

UNLESS customer requests it at the time AP-5004 is ordered. The RED boxes on **Fig. 1-3** are external devices that need to be installed for AP-5004 configuration. Current standard delivery firmware version for AP-5004 is MDVR2.X. You can also get this information after running up AP-5004 by entering “advanced set up ->”system information” from GUI screen.

2.1 Power connection -

Connect the “+” & “—” terminals on the power plug to the correct polarity of vehicle battery. The “ACC” terminal needs to be wired to the “ACC” signal of engine ignition, in order to activate the AP-5004 power-on/off delay feature. If you don’t want to bother the “ACC”, then you can connect “ACC” and “+” terminals together to enable power control by the ON/OFF switch at the back panel. Under this condition, there will be no power-on/off delay..

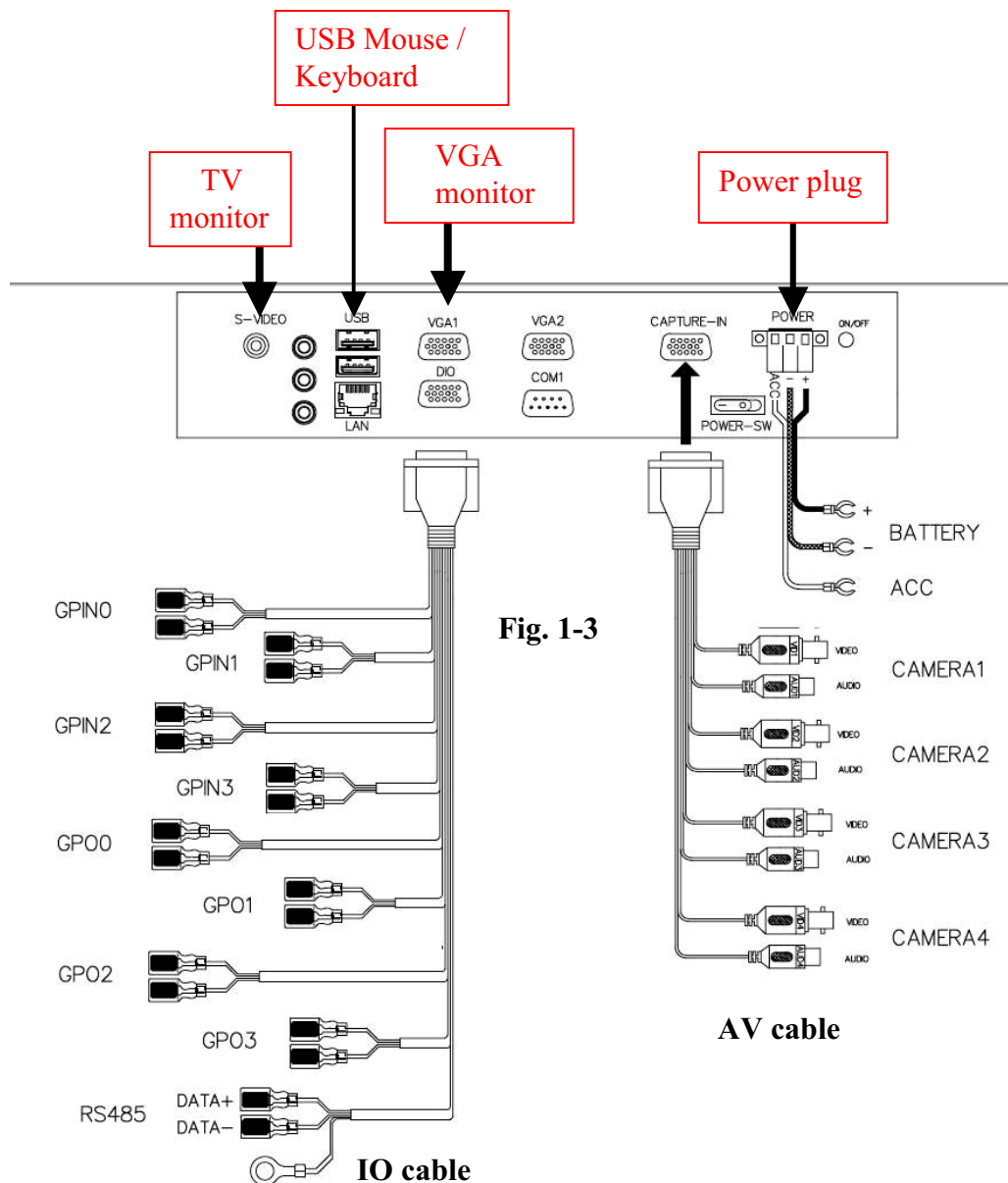


Fig. 1-3

2.1 Capture-in

Insert the AV cable connector that comes with AP-5004 to this plug to retrieve camera video signals and audio inputs. AP-5004 can support 4 cameras. The audio RCA plugs are reserved for future use. Connect camera video outputs to the BNC leads on this connector.

2.2 VGA monitor

Although there are two VGA outputs on Fig. 1-3, VGA1 & VGA2, currently only VGA1 is available. VGA2 is reserved for future use. You can connect a VGA monitor on VGA1 to have local live view and do playback or configuration.

2.3 TV monitor

The S-Video output on Fig. 1-3 is to connect to a TV monitor.

2.4 DIO connector

AP-5004 can support 4IN and 4OUT dry contact IO points. Plug the IO cable that comes with AP-5004 to this connector. Each IO has uses a set of 2 pins ("+", "-")

2.5 RS485 interface

AP-5004 has a RS-485 interface for PTZ camera control. This is combined on the DIO connector, as on Fig. 1-3, "DATA+", "DATA-" and "GND" leads are for RS-485.

2.6 Hard disk / SSD card installation

AP-5004 uses 2.5" SATA hard disk or SSD card. The installation procedure is as follow:

2.6.1 Remove hard disk from AP-5004 cabinet.

Loosen the screws on hard disk tray that tight with AP-5004 cabinet as **Fig. 1-4**



Fig. 1-4

2.6.2 Pull out the hard disk tray as Fig. 1-5



Fig. 1-5

2.6.3 Loosen the 4 screws at the two sides of the hard disk tray and lift up the plastic tape to move tape out the hard disk. Then you can exchange the hard disk or install a new one.



screw

screw

2.7 USB Mouse - You need a mouse when you want to do the system configuration or back up record files. There are 4*USB ports on AP-5004. Two at the back panel and the other two at front. If you don't use mouse, you can use IR remote controller to operate it.

3. External 3G modem an GPS modem installation

You will need an external 3G modem for communication between AP-5004 and control center. If you also want to have GPS tracking with e-Map support on SecuTrack CMS, then, you will need a GPS modem. **Please refer to the documentations “FW MDVR1.x 2.x 3G-GPS configuration-guide” and “3G basic Knowledge” for more information.**

4. Note

4.1 Camera power – The 12V camera power is NOT included in AP-5004. It has to come from battery of the vehicle. If you need assistance, please consult your local reseller or e-mail to sales@apeccctv.com

4.2 Vehicle camera – You may need small size or weather proof cameras for the installation. If you have difficulty in finding them from your local market, please consult sales@apeccctv.com

4.3 Video / Audio cable – Cables connecting video & audio signals from cameras or microphones to AP-5004 are important to ensure the video / audio quality. **Please use proper quality AV cable to avoid noise generation.**

Chapter 2. Getting Started

Please connect a VGA monitor on “VGA1” or a TV monitor to “S-Video” of AP-5004 back panel for local live screen. AP-5004 has delay power ON / OFF after the vehicle ignition is turned ON or OFF, if the “ACC” signal is connected. (Please refer to section 2.1, chapter 1).The default delay ON time is 15 seconds and delay OFF time is 30 seconds. So, please wait a little bit for VGA screen to show up after power ON.

AP-5004 can support maximum 4 channel cameras. So, those buttons or indicators for operations on more than 4 channels, **are NOT workable on AP-5004**.

2.1 Main screen

After AP-5004 boots up, you can see its main screen as Fig. 2-1. You can see the camera videos on local VGA screen. The graphical user interface (GUI) composes of the control panel, status panel, and camera selection panel. Please go on to Chapter 3 for a detailed explanation about the GUI operation.



Fig. 2-1

2.2 Running mode of AP-5004

There are two kinds of running modes on AP-5004, “mouse” mode or “IR control” mode. The factory-default operation mode is “mouse”.

2.2.1 Change running mode.

You can change AP-5004 running mode back and forth between “mouse” and “IR Control”. Each time you change mode, AP-5004 will reboot to take the change into effect. **Please be noted,**

you can configure or operate all the advanced functions **ONLY** at mouse mode.

2.2.1.1 From mouse mode to IR mode

You can change it to “IR control” mode from the main screen by clicking the “Setup” button, enter “system configuration”. Under “Running mode”, change the “Control” field from “mouse” to “IR” and then click “OK”. AP-5004 will reboot and change to IrDA control mode.

2.2.1.2 From IR mode to mouse mode –

Follow these instructions to switch from IR remote control running mode to mouse running mode:

1. Press the **Menu** button on the remote control to display the setup menu on screen.

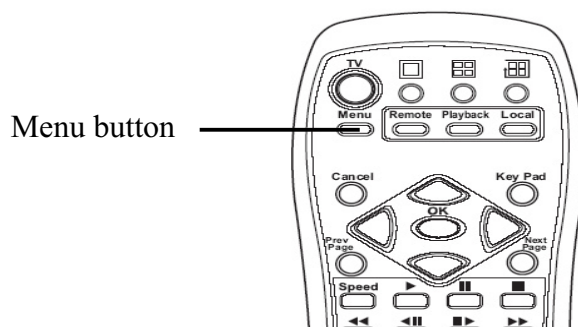


Fig. 2-2

2. Use the up and down arrow buttons to highlight the **Running Mode** option and press the **OK** button to confirm your choice.

The running mode menu will be displayed on screen.

```
Running Mode
Mode-Network Mode
Control-IR Control
```

3. Use the up and down arrow buttons to highlight the **Control – IR Control** field.
4. Use the left and right arrow buttons to toggle between **Control – IR** and **Control – mouse**.
5. Press the **OK** button when the control field is set to mouse.

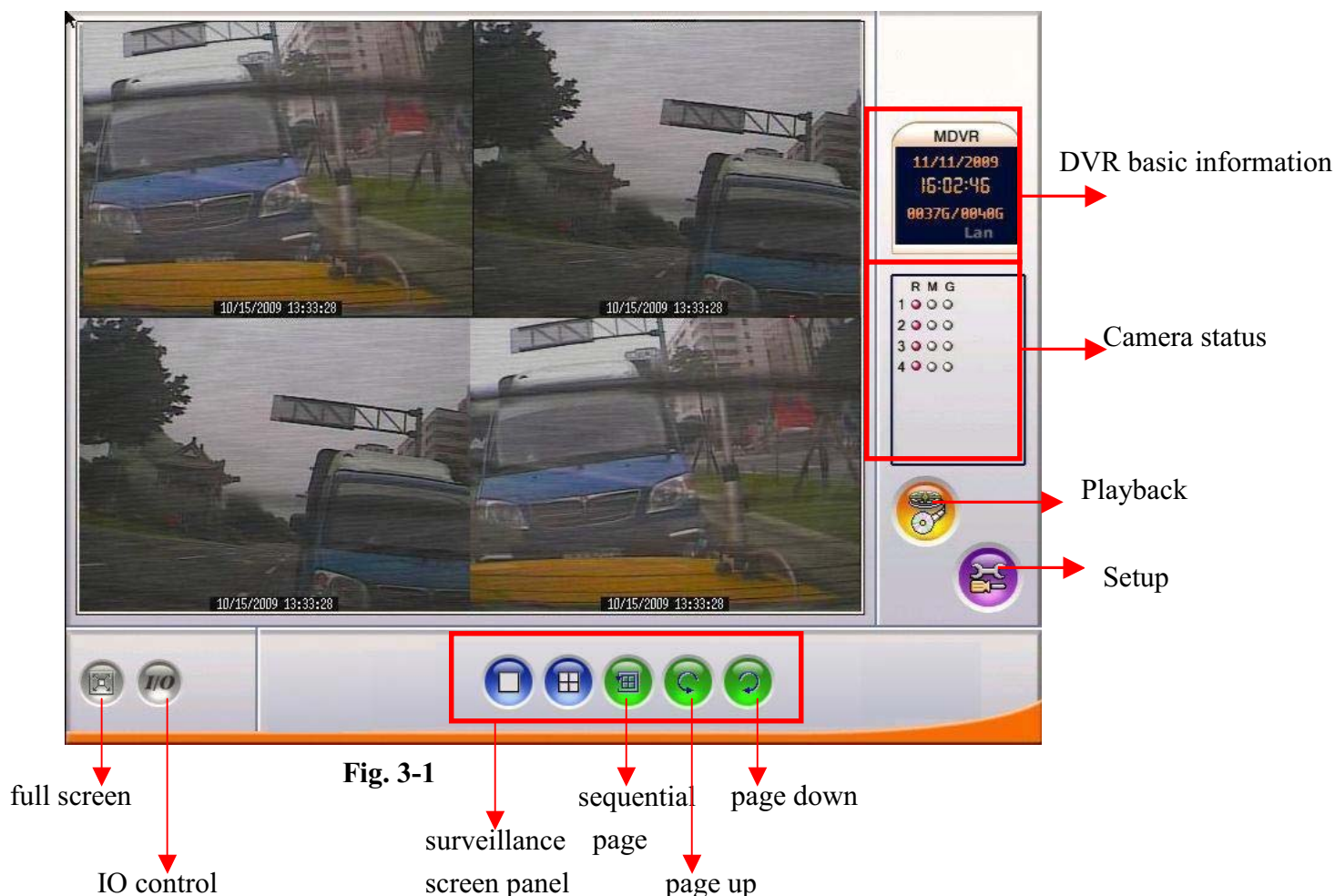
The unit will reboot when the **OK** button is pressed. It will restart in mouse running mode. **Please refer to Chapter 4 for IR control OSD operation.**

Chapter 3. Graphic User Interface (GUI)

3.1 Introduction

This chapter covers AP-5004 operation. Mouse is used for all of the operations and keyboard is ONLY for data entry, when necessary.

Local VGA GUI screen :



DVR basic information: including date, time, total hard disk size and LAN status.

Camera status:

R

Color	Recording Mode
Gray	No video signal
Blue	No recording
Red	Full recording

M

Color	Motion detection Status
Gray	Motion not detected
Yellow	Motion detected

G

Color	Status of each DI and DO device.
Gray	DI or DO not detected
Red	DI or DO was detected

3.2 Surveillance screen panel

The Surveillance screen panel enables you to define which live images are displayed on screen.



Fig. 3-2

A. You can select 1 / 4 split-screen display.



Fig. 3-3

B. Use the sequence button to automatically cycle through all the connected cameras.

C. The arrow buttons to page down or page back cameras.

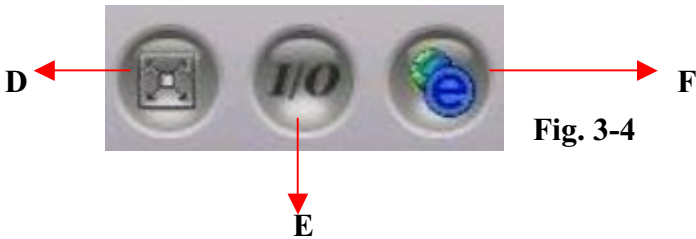


Fig. 3-4

D. Enlarge button

Click the enlarge button to switch to full screen live video display.

Double click mouse right button to switch back normal live video.

E. IO control button

Click to bring up GPIO status panel as Fig. 3-5.

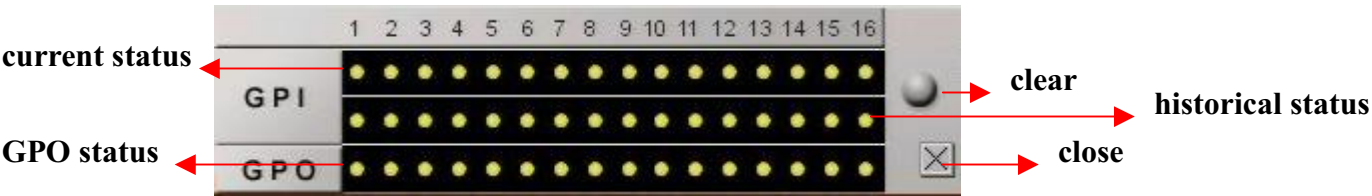


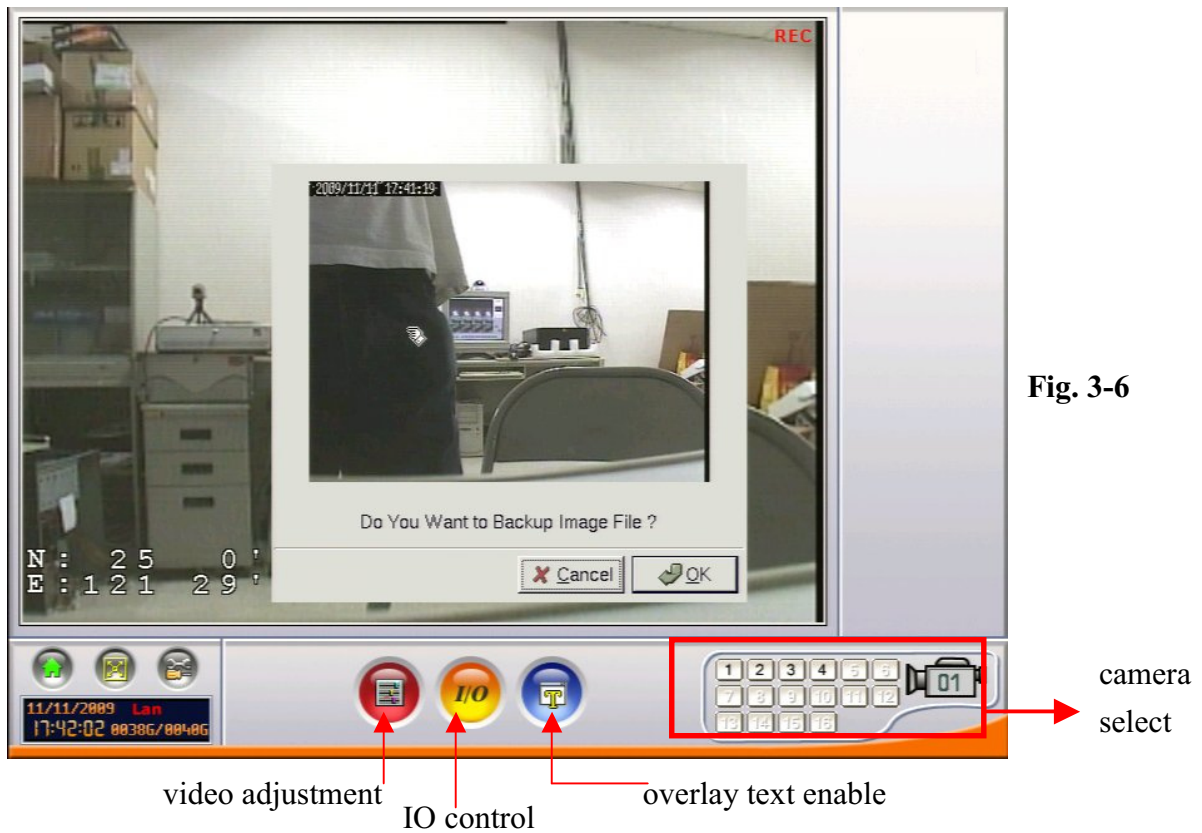
Fig. 3-5

On Fig. 3-5, the top row of yellow points indicate current status of GPI. It becomes RED when GPI is activated. The middle row of yellow points indicate historical status of GPI. That means, if any of the GPI was activated before, the corresponding point became RED and stay RED unless the “clear” button is clicked. The bottom row yellow points indicate current GPO status. When activated, it becomes RED and remains there until it is de-activated. Click “close” to close this IO status panel.

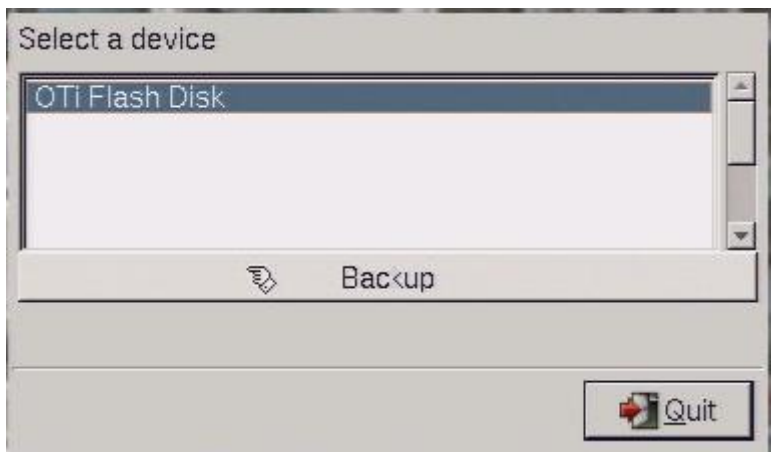
Live Single Camera View

3.2.1 Snapshot

You can do snapshot of camera image when viewing single camera window. Right click mouse and the screen will have a “SAVE” button appears. Click it and you will get a pop up window as **Fig.3-6**



Click “OK” and then you will be asked to select a back up device. Then, click “Backup”



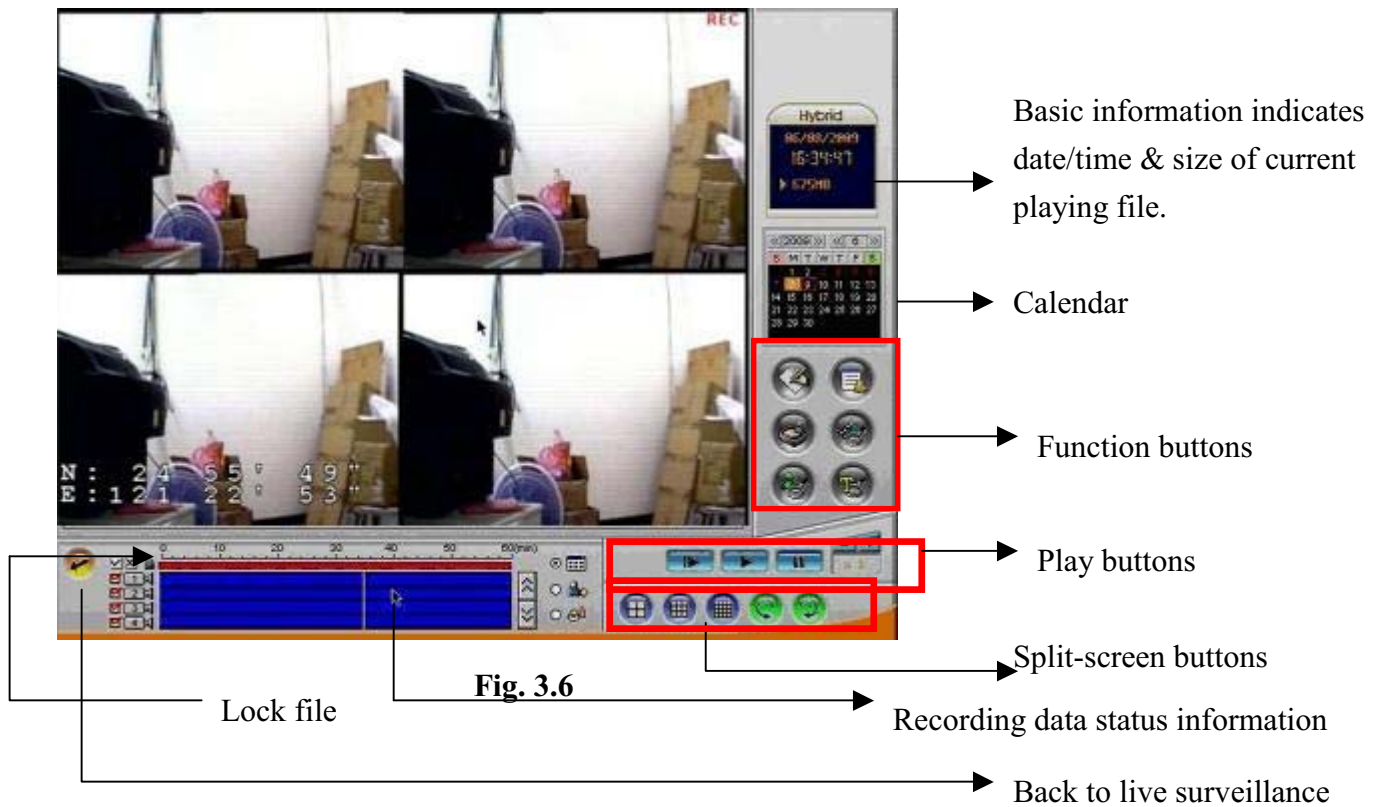
to save the image. After that, you need to click “Quit” to leave the back up window.

3.2.2


3-3 PLAY Back Record file



Click the PLAY button to bring up Fig. 3.6 for playback the recorded files in the hard disk.



Function buttons:

- | | | | | | |
|--|------------------|--|-----------------|--|---------------------|
| 1.  | Bookmark | 2.  | Alarm log | 3.  | Backing up the data |
| 4.  | Thumbnail Browse | 5.  | Search by Event | 6.  | Search by Text |

How to play recording file:

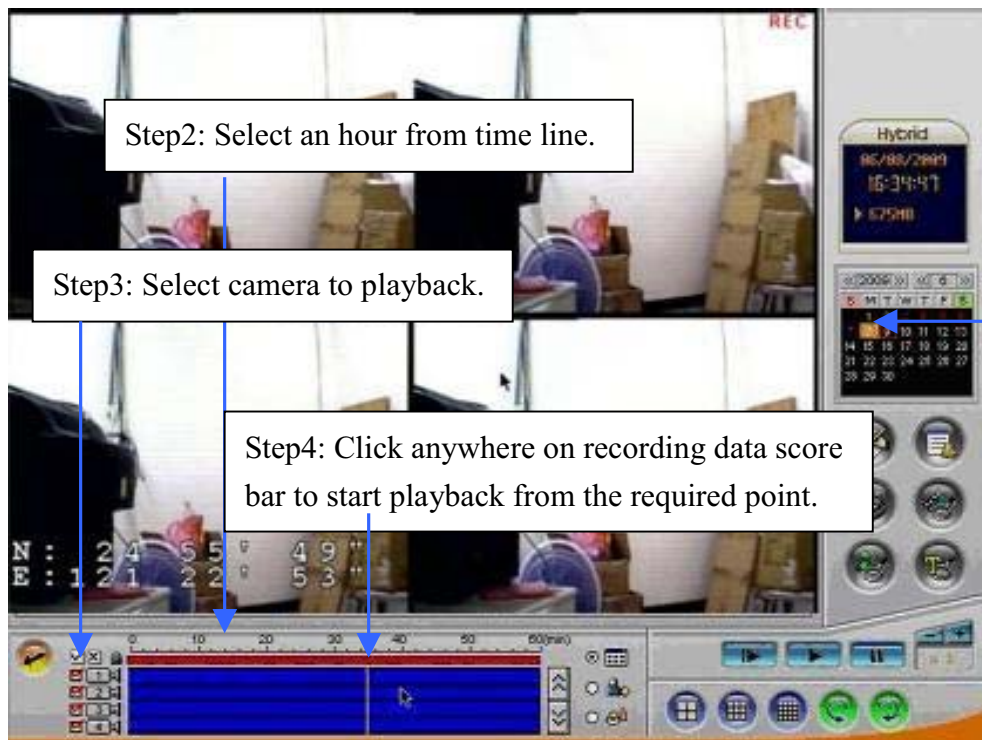
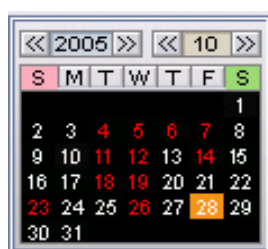


Fig. 3.7



Date Color	Meaning
Red	Have recording data
White	No recording data
Square	Today's date
Orange	The day that was selected for playback

Lock file: click the score bar under time line can lock file to keep the file will not be erased when cyclic recording.

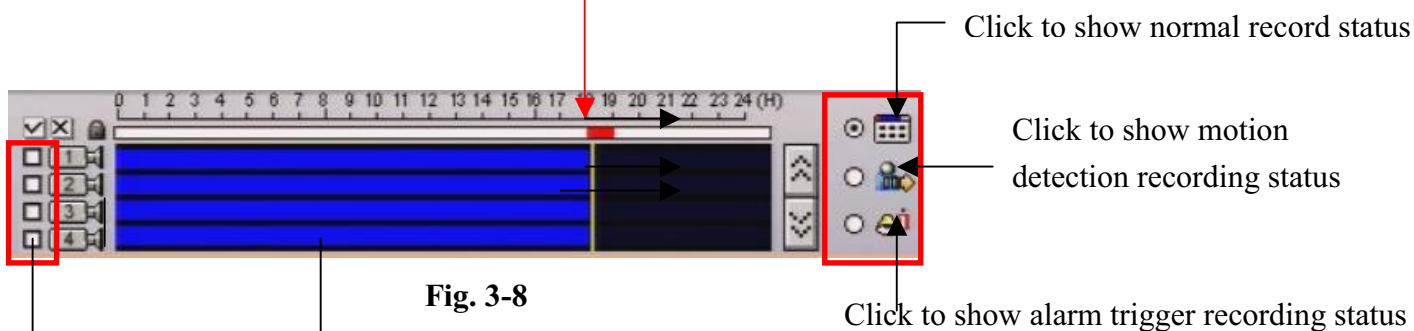


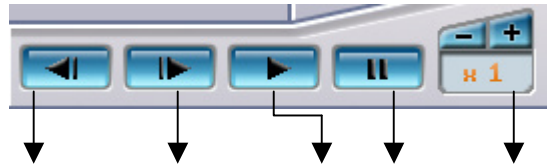
Fig. 3-8

Record data status: click anywhere on score bar to start playback from the required point.

Select camera: Select the cameras you want to display

3.3.1. Play buttons:

Use the Play buttons to control playback of stored footage from the cameras.



Step backward Step forward Play Pause Control playback speed(1/8x ~ 4x)

The fastest speed of the single image playback is 4x; slowest speed is 1/8x. Click “+” button once to double playback speed from normal. Click “-” button will decrease playback speed.

3.3.2. Split-screen display buttons:

Split-screen display buttons enables you to define which split-screen is displayed on screen.



Selectable 4 split-screen

The arrow buttons to cycle through

3.3.3. Video adjustment when playback



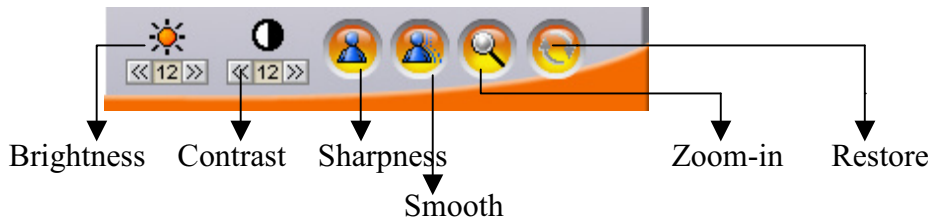
“water mark” flag.
becomes RED if the
video was modified
Only appears when
single camera view

Fig. 3-9

These buttons ONLY appear when single camera window is selected on local display screen

You can do camera image adjustments for brightness, contrast, sharpness and smoothness when single camera view is selected at playback. Click “pause” and then do the adjustments via the buttons as

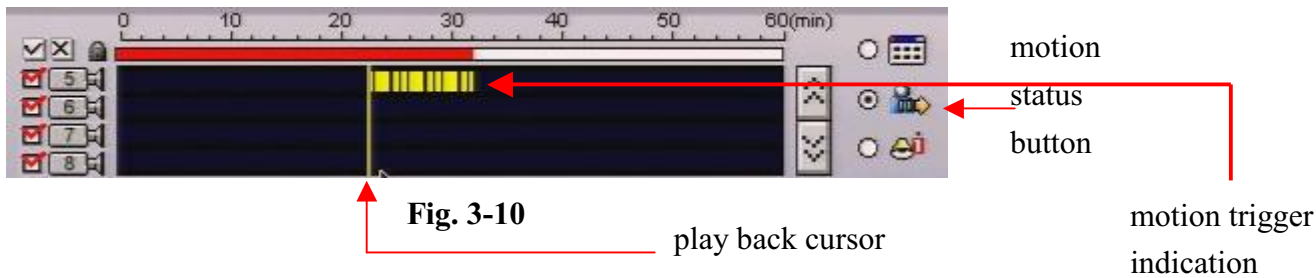
Fig. 3-10. You can also zoom in specific point of the image to get clear view.



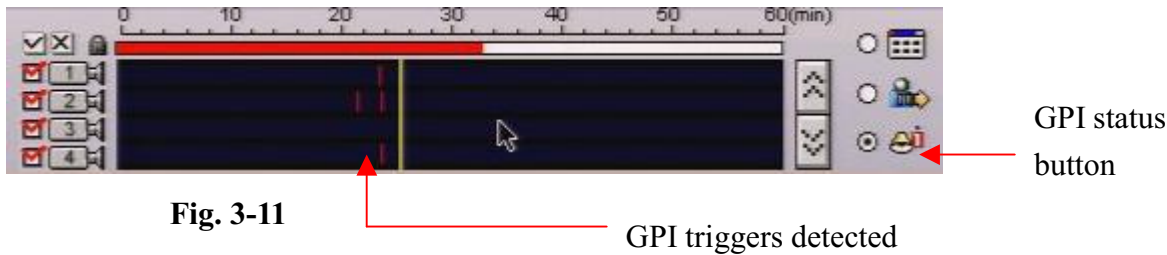
3.3.4. Status Button

The status panel displays the playback status of the current record. The aqua line (**Data**) indicates record data over an one hour time interval, as **Fig. 3-8**.

Click “motion status button” on Fig. 3-10 to show motion status of the record file. The yellow bars (**Motion**) indicate the instance when motion was detected. On Fig. 3-10, camera#1 had motion trigger started from around 22:00 till 32:00 minutes in this hour.



Click GPI status button to show GPI trigger status of the record file as Fig. 3-11. The vertical small orange bars indicate when GPI events were detected.



The vertical yellow line on **Fig. 3-10** is the playback cursor. Click anywhere on the Data, Motion, or GPI lines to start playback from that point.



3.3.5 Bookmark

User can have bookmarks at the specific time during playback.

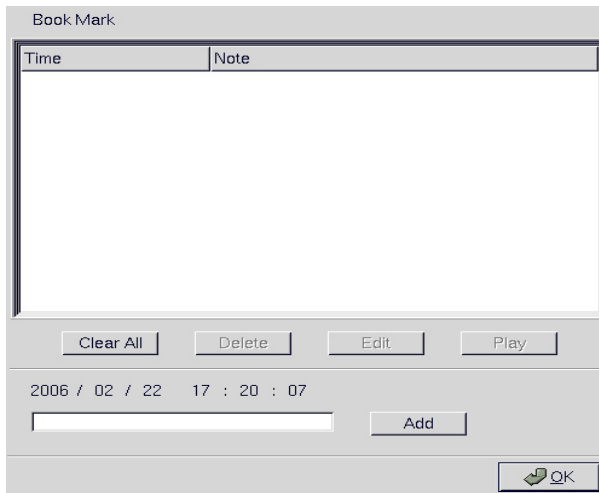


Fig. 3.12

Bookmark:

1. During playing recording file user can click “bookmark” button to mark the specific time point.
2. User can write down the note and click “Add” button to save it. The new bookmark file will be locked.
3. Select one of the lists of recording file in bookmark field and click “play” button to playback.



3.3.6 Alarm log

Any alarm will be written into alarm log including motion trigger 、GPIO trigger 、Disk error 、Video loss 、POS event.....etc. User can search alarm log by specific time and double click one of the alarm log on the list to playback the video.

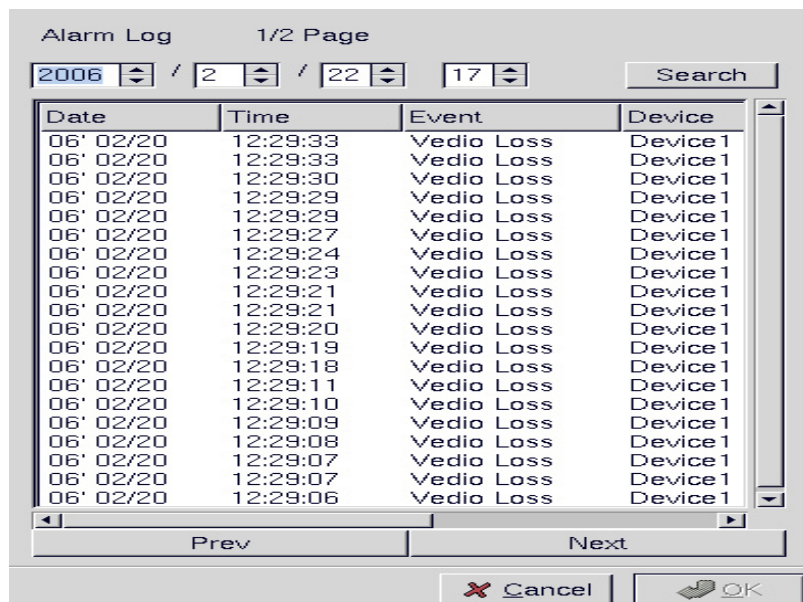


Fig. 3.13



3.3.7 Backing up

You can back up record files to VCD/DVD RW or USB HDD drives. Click the “backup” icon.

Fig. 3-14 shows the back up device found. Here we have “USB Flash Disk”. Then, click “OK” to

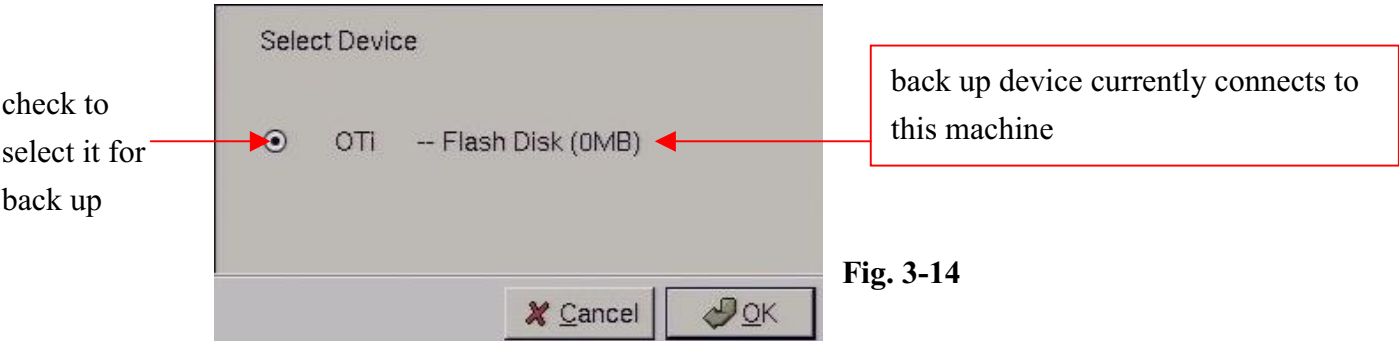


Fig. 3-14

bring up **Fig. 3-15**. If you answer “OK”, AP-5004 will clear all data on the USB Flash Disk.



Fig. 3-15



Fig. 3-16

If you click “Cancel”, then, Fig. 3-16 shows you how much space left on the USB Flash Drive before doing file copy. You then need to select the date / time and cameras on **Fig.3-17**

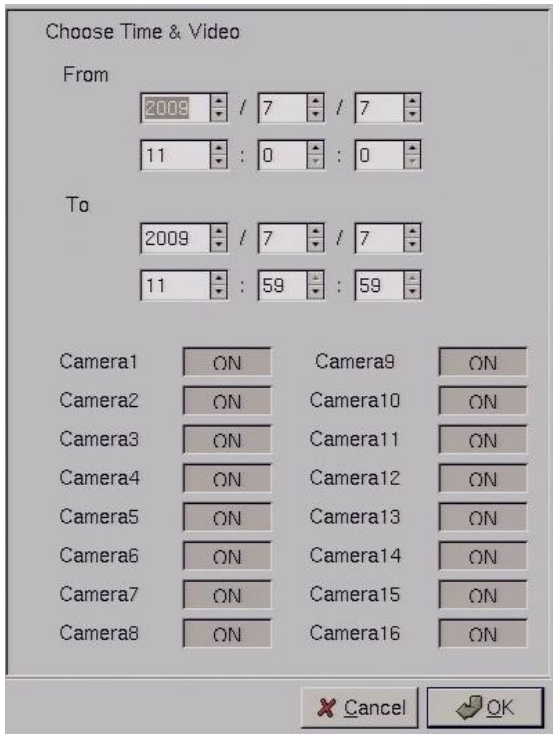


Fig. 3-17

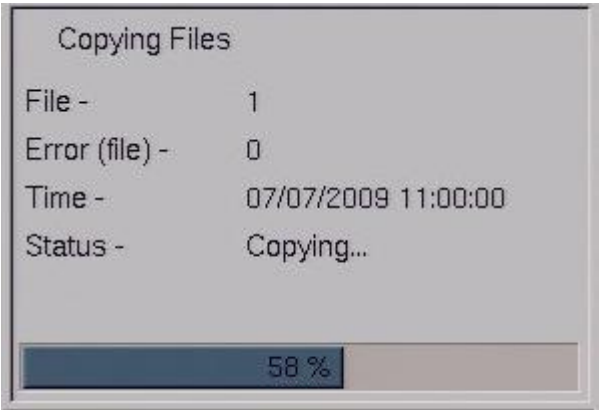


Fig. 3-18

Then, click “OK” to start file copy as **Fig. 3-18**. After completed, Fig. 3-19 show you the result of

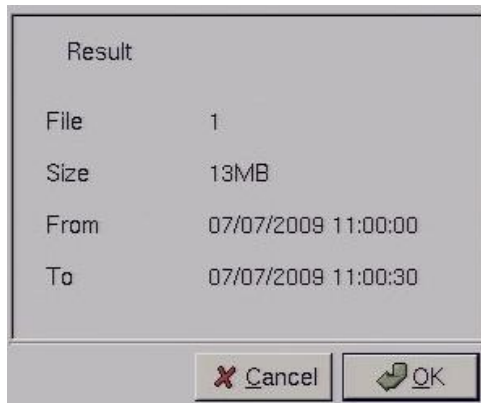


Fig. 3-19

how many files, size and date / time period that was back up.

For back up to VCD/DVD RW, the procedure is similar, but you will need to answer the burning speed you want. The default speed is X5.

Note: It takes some time for AP-5004 to get video data before it can start the back up process.



3.3.8 Thumbnail Browse

Finds video images and selects them for processing individually, in whole folders, using a simple time selector and built-in image viewer .you can check out the results with the built-in viewer.

1. Select search starting time and camera.

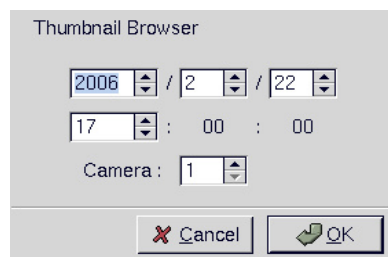


Fig. 3.20

2. Using a simple time selector and built-in image viewer .You can check out the results with the built-in viewer.



Fig. 3.21

Previous - Search forward

Next - Search backward

Zoom in - The whole Thumbnail search was divided to three layers. The first layer is hourly based. Each picture on the windows is the first picture of that hour. When select a specific hour to do Zoom in, it goes into second layer. The second layer displays 16 pictures based on evenly divided time slots in this hour. Then if any one of these pictures is selected to do Zoom in, it goes into the third layer. This layer displays 16 pictures from left to right, that are most close to the time slot of layer two.

Zoom out - Back to one layer up.

Back - Back to Thumbnail Browser window

Ok - Start playback recorded file



3.3.9 Search Function

When you click search button, **Fig. 3-22** appears on the screen. It is default at “Time” search. But you can select “GPI” or “Motion Detection” from the “Rule Selection” field.

3.3.9.1 Search by Time

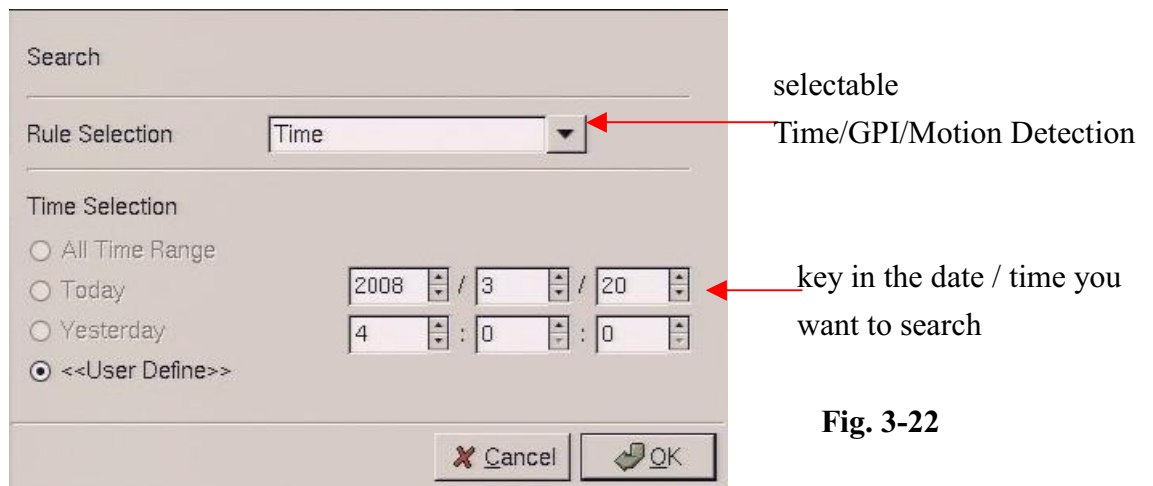


Fig. 3-22

3.3.9.2 Search by Event

Searches the list of recorded files for the specified event such as a specific area of motion or a GPI Trigger that occurred within the specified time interval.

Search by GPI Trigger:

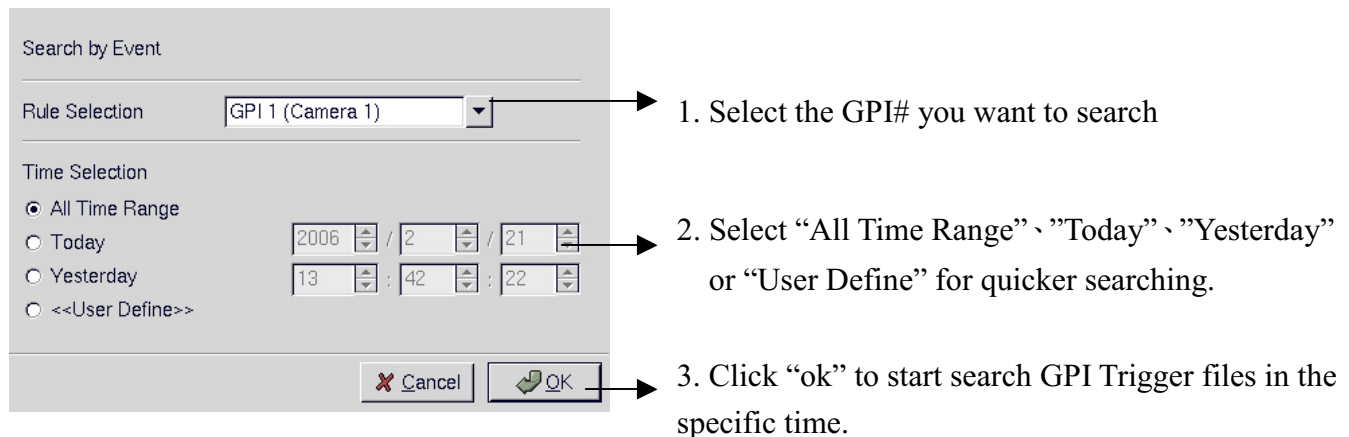


Fig. 3.23

The search result gives you the first camera image which was related to that camera on the screen. as **Fig. 3.24** . On **Fig. 3-24**, you can do play, list all files of the search, select next or go previous record. There is a date / time and camera # indication window to show you when and which camera video you are currently looking.

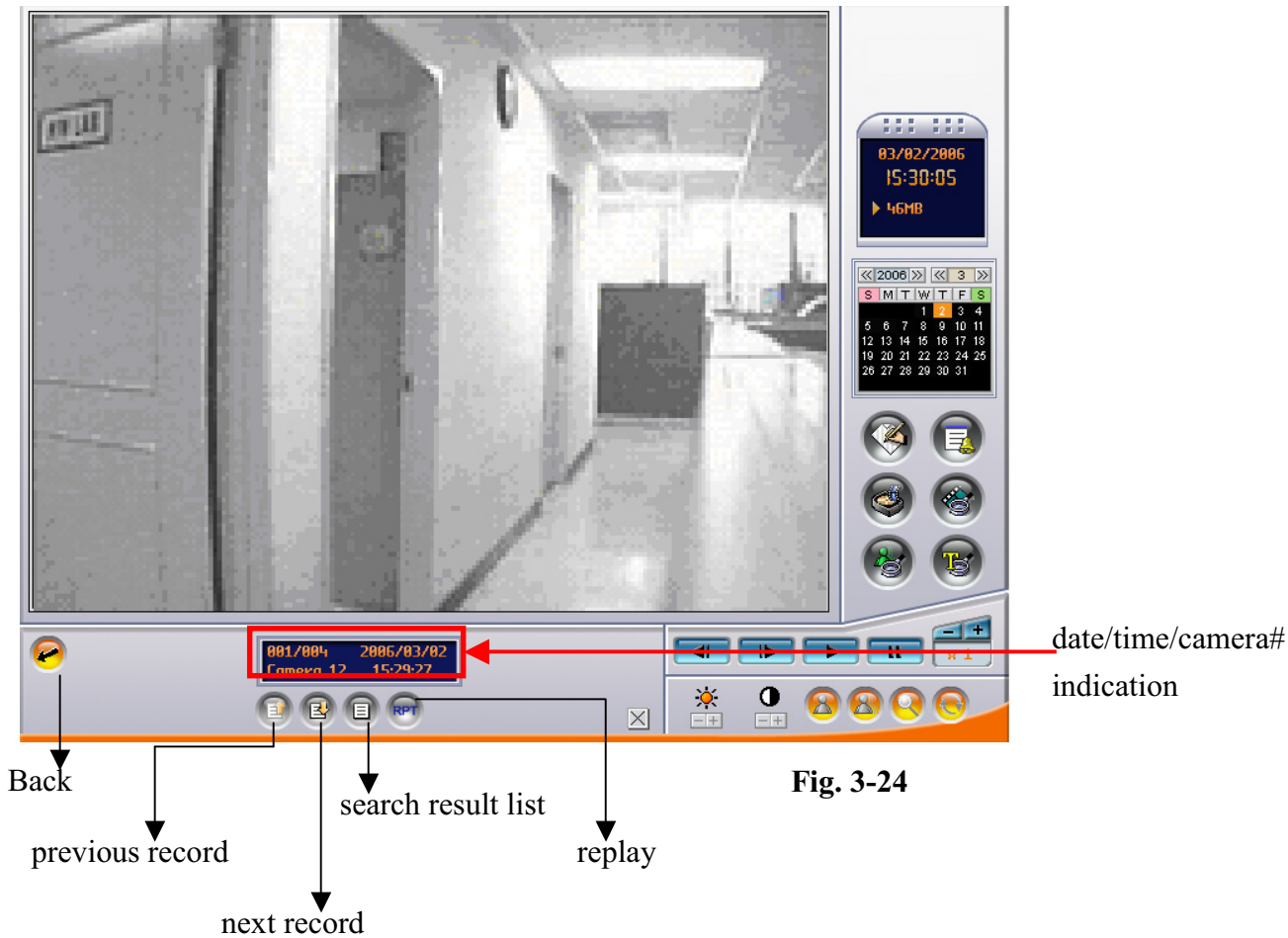


Fig. 3-24

3.3.10 Search by Motion

On Fig. 3-23, if you select motion detection as Fig. 3-25, the screen of Fig.3-26 will pop up for your selection of the motion detection area.

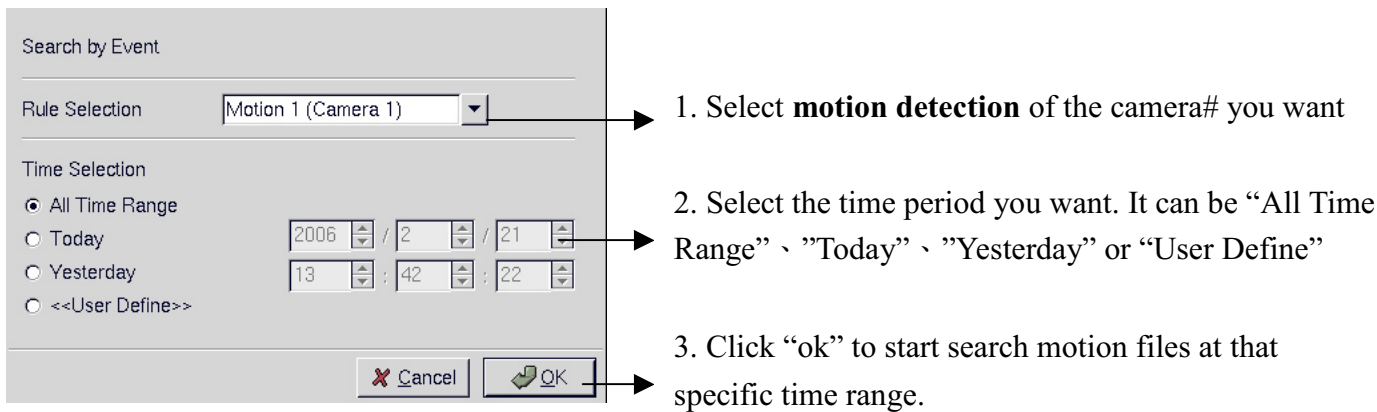
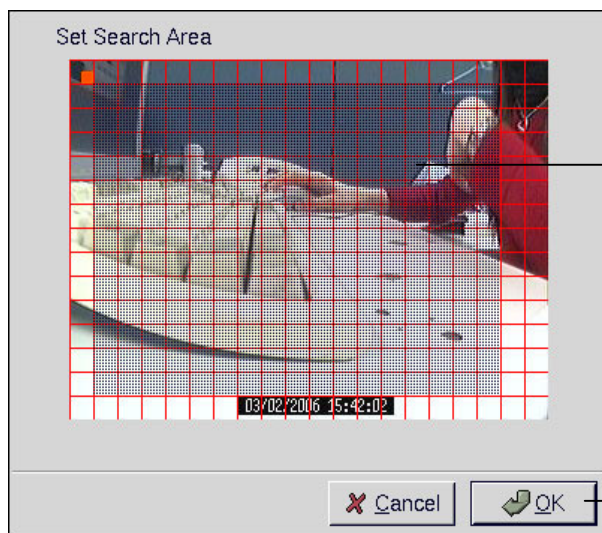


Fig. 3-25

**Fig. 3.26**

4. And then select search area by mouse left button drag.

5. Click “ok” to start searching motion files at that specific area.

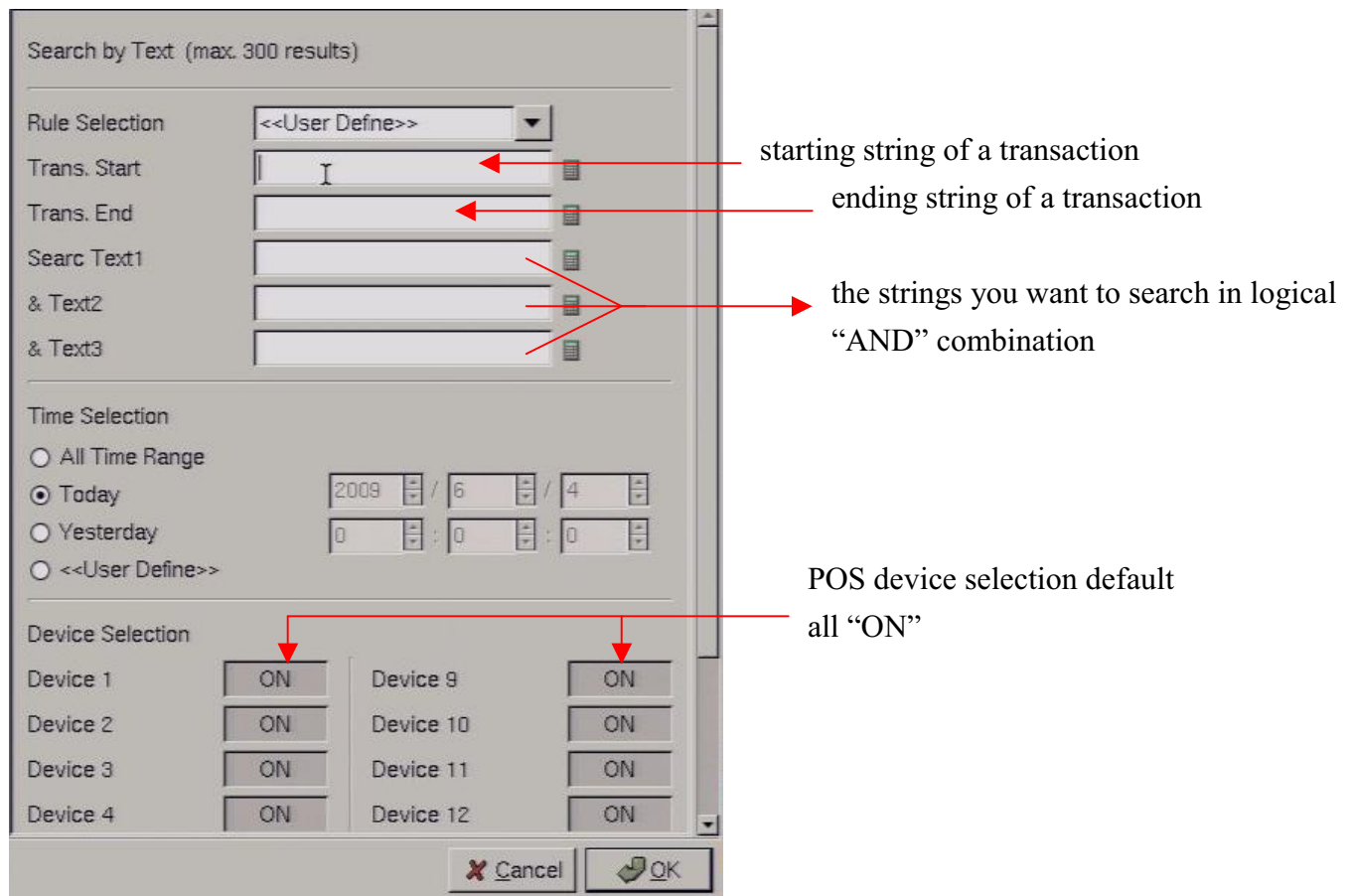
Search result and following operations are the same as **Fig. 3-24**.



3.3.11 Search by Text (This function is NOT available on firmware version MDVR 2.0)

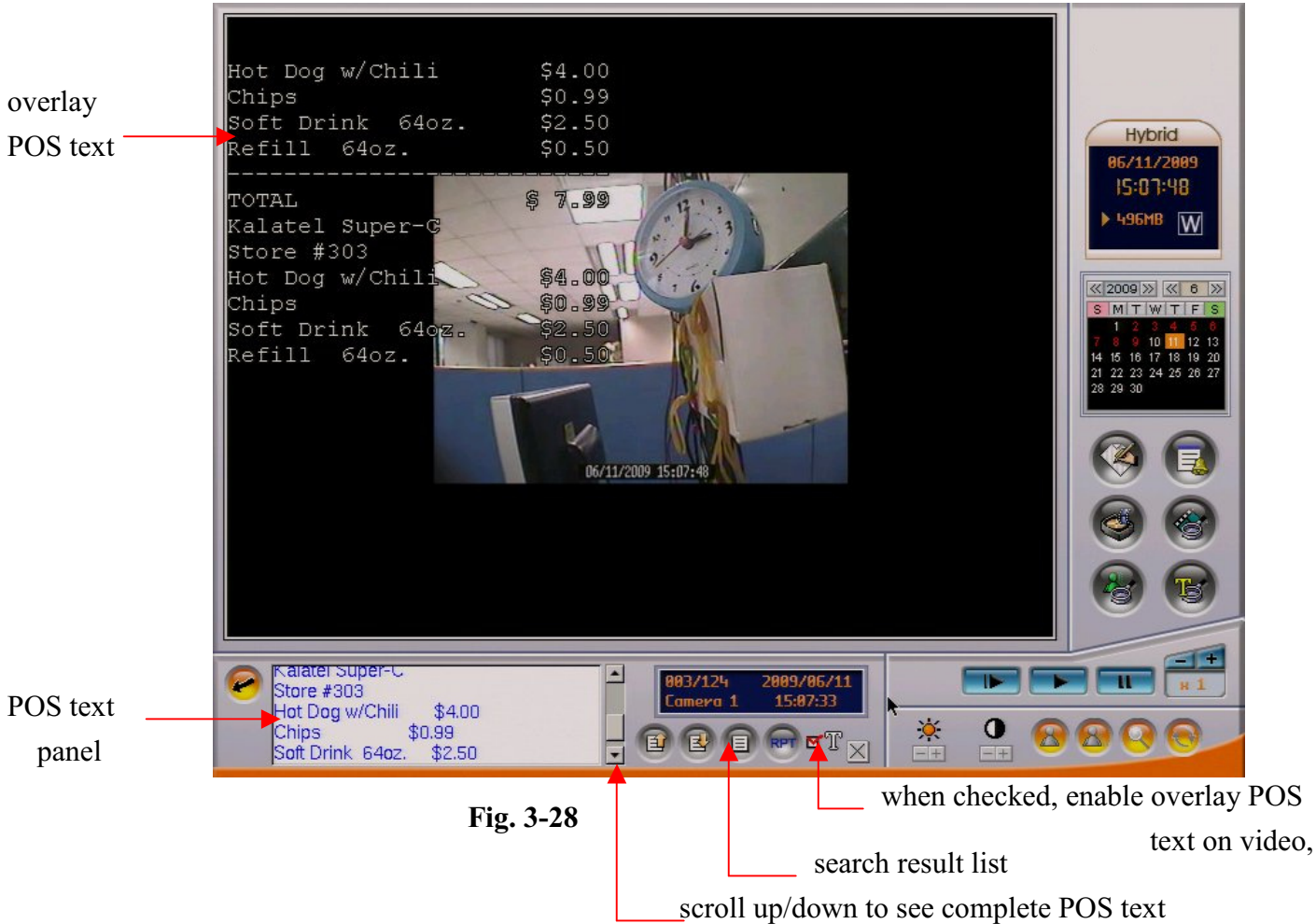
This function is to search record video files that contain specific POS text data for playback. This search can be “transaction based”. That means you can define the “starting” and “ending” string of a bill and search the text you want in this deal. You can define 3 fields of search text in logical “AND” combination to search. This gives you unique results of the search.


The “Device Selection” section is for you to select the POS devices(channels) that you want to do text search. Default is all “ON”. This is no harm even if you do not have so many POS devices connected. **Please refer to section 3.6.10 for more detail about POS device.**

**Fig. 3-27**

The search result is as **Fig. 3-28**. The first record of the search result is playing on the screen. But the background searching keeps going. After searching completes, the record list shows up at the bottom of the screen. You can then click any one record in the list to play.

On Fig. 3-24, the playback is single camera based. POS text is overlay on the camera video in "white" color. There is a POS text window at left bottom of the screen where you can see the complete POS text in the record.



Note : Click the  “search result list” button to show the record list of search

Date / Time		Device
2009-06-11	14:39:14	Device 1
2009-06-11	14:42:39	Device 1
2009-06-11	15:07:33	Device 1
2009-06-11	15:07:44	Device 1
2009-06-11	15:07:56	Device 1
2009-06-11	15:08:07	Device 1
2009-06-11	15:08:18	Device 1
2009-06-11	15:08:29	Device 1
2009-06-11	15:08:40	Device 1
2009-06-11	15:08:51	Device 1
2009-06-11	15:09:03	Device 1
2009-06-11	15:09:14	Device 1
2009-06-11	15:09:25	Device 1
2009-06-11	15:09:36	Device 1
2009-06-11	15:09:47	Device 1
2009-06-11	15:09:58	Device 1

Fig. 3-29

3.4 Snapshot

You can do snapshot to capture one image of current playback file by click “pause” button and then, mouse right click. You will see a “SAVE” button appears on the image screen and mouse cursor becomes “X”. Click “SAVE” button and you will get a pop up image on the playback screen as **Fig. 3-30**.

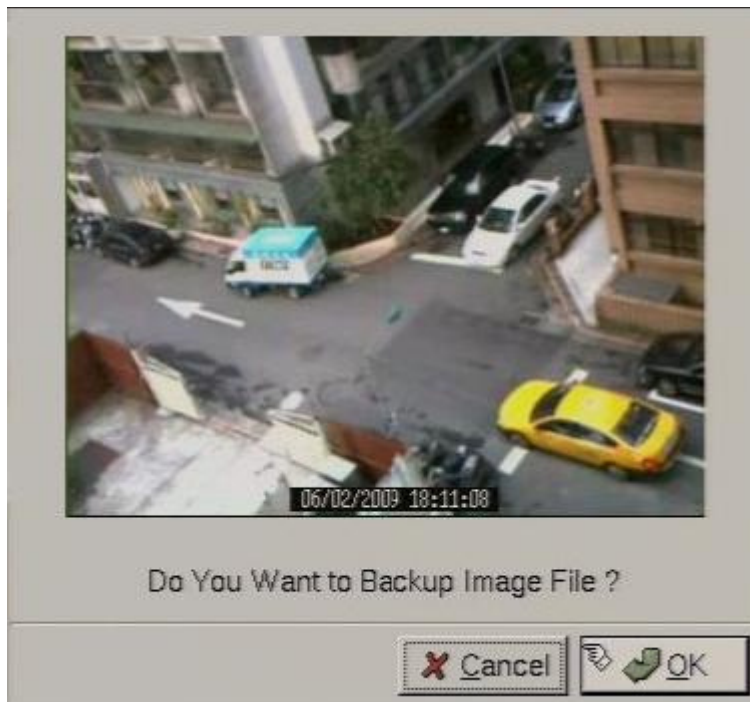


Fig. 3-30

You need at least one USB pen disk inserted on AP416 as back up device. If you answer “OK”, then, you will be prompted for back up device selection as **Fig. 3-31**. Select the device and then click “Backup” to save the image. The file name saved has the format “snapshot(X)_yyyymmdd_hhnnss.jpg” Where (X) is the camera number starting from 0 as camera#1.

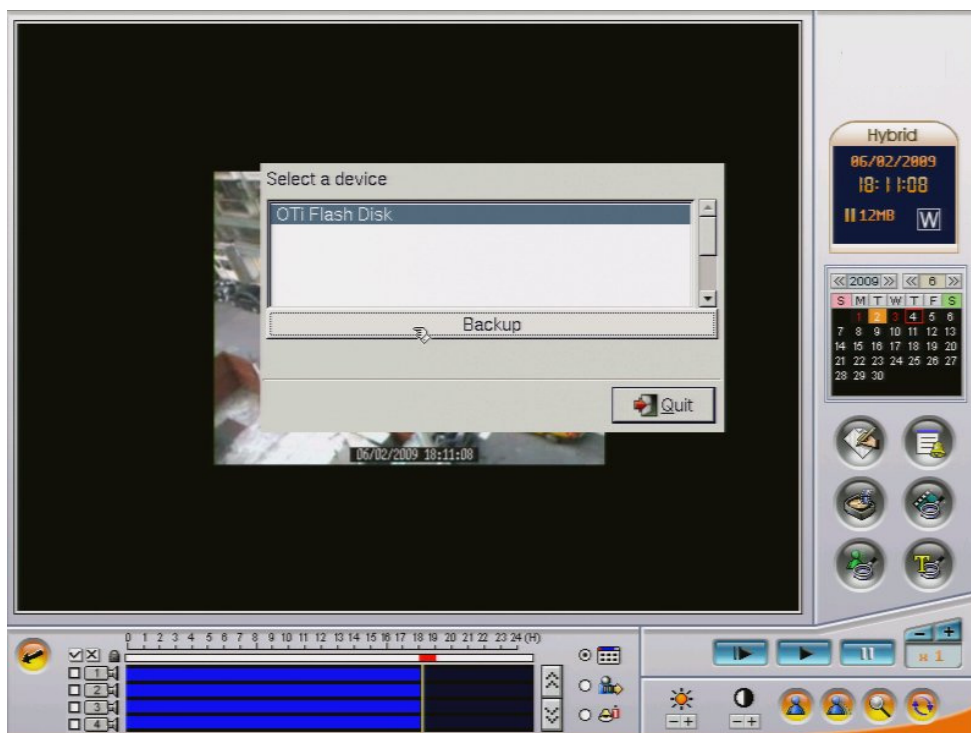


Fig. 3-31

3.5 Close playback screen



Stop playback recording file and back to the recording file list menu.

[System setup]



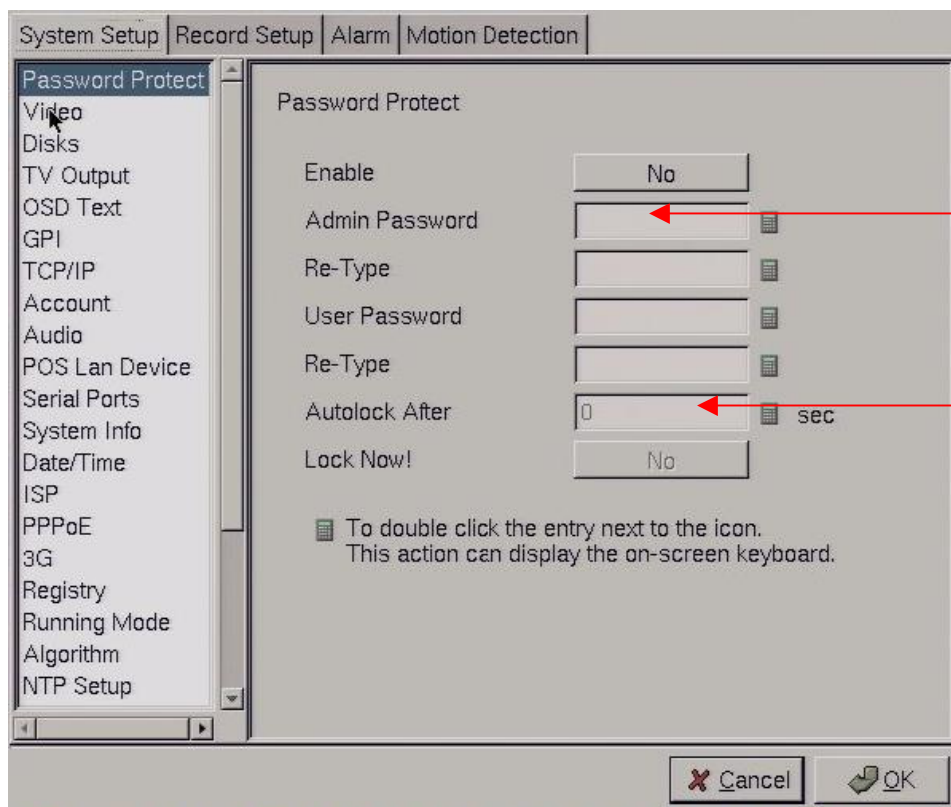
3.6 Setup

Click the Set Up button to enter AP-5004 system configuration menu. There are sub menus, **System Setup, Record Setup, Alarm and Motion Detection** can be configured.

This section explains each of the menu pages in turn.

3.6.1 Password Protect (for local access)

Here you can set password protection, administrator and user passwords, auto lock period or lock the system immediately. The passwords are “*” encrypted, so that you need to enter twice for confirmation.



double click to bring up on screen keyboard

operation locks after the # of seconds you enter and request for password

“Admin” & “User” here are for login from local VGA screen

Fig. 3-32

If you enter number of seconds in “Autolock” field, you will need to enter password when you want to do any operation after the number of seconds you set. “Lock Now!” is to lock and ask for password immediately.

Note: If you do not have a keyboard connected to the system, you can use the on-screen keyboard to enter your passwords. Double-click the field to display the on-screen keyboard and use mouse selection for characters entry.

3.6.2 Video

The Video menu enables you to set video parameters such as the video standard and so on for each camera. Select the camera from the Camera drop-down box and fill in the details in each field as required using mouse.

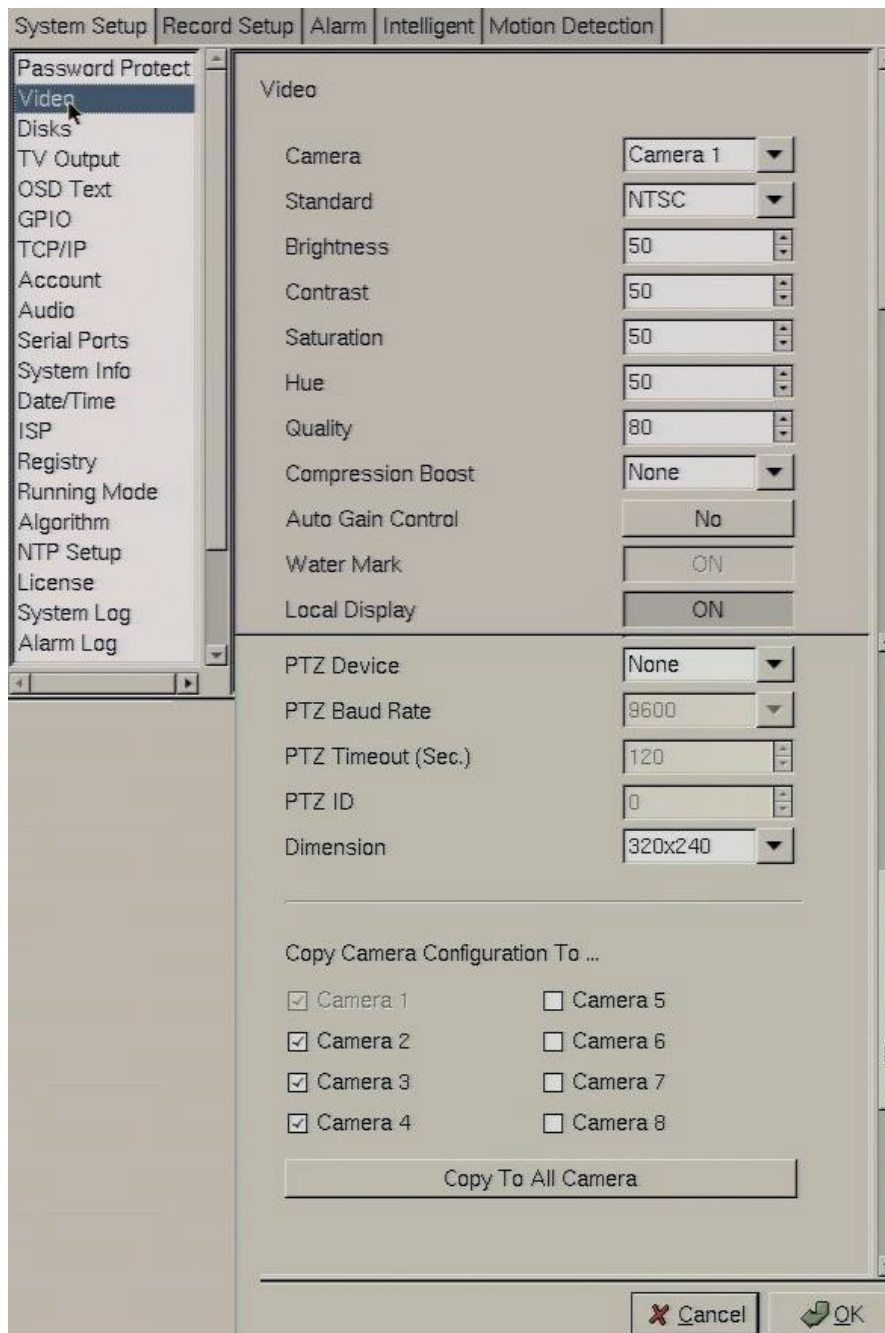


Fig. 3-33

Standard: sets the video signal format. Choose NTSC in the US, or PAL in Europe and most Asian countries. If you are not sure about this option, select Auto. AP-5004 will detect the video standard automatically.

Brightness: adjusts the amount of light or brightness for the selected camera according to your preference.

Contrast: adjusts the difference between light and dark areas or contrast for the selected camera according to your preference.

Saturation: adjusts the amount of color for the selected camera.

Hue: adjusts the dominant color for the selected camera.

Quality: adjusts the video quality for each camera. The default setting is 80. We recommend that you **do not set this to 100** to avoid a slower rate of video transmission and using up a significant amount of hard disk space.

Compression Boost: This is ONLY valid for H.263 algorithm. Its purpose is to lower video data rate. But it sacrificed video quality.

Auto Gain Control: enables automatic gain control to adjust the video signal strength.

Water Mark: Sets water mark protection on the video image.

Local Display: enables viewing the selected camera video signal on the local display. If this option is set to Off, the camera is still optional and its video can be recorded if needed.

PTZ Device: Select PTZ model from the support list. If you can't find it, please contact your reseller.

PTZ baud rate: each camera have different baud rate, please set correctly.

PTZ time out: The timeout value represents the time given to the camera in responding to a command.

PTZ ID: each camera can define different ID, please set correctly when you have more than one PTZ cameras in one AP416 unit.

Dimension: sets 320 x 240 or 640 x 480 resolution for each camera.

Copy Camera Configuration To : User can select cameras and press "ok" button to copy the configuration of current camera to the selected cameras.

3.6.3 Disks

This is for the configuration of **network disks** such as NAS or NFS server. If nothing is connected, (No Device) appears on the Disk Device field.

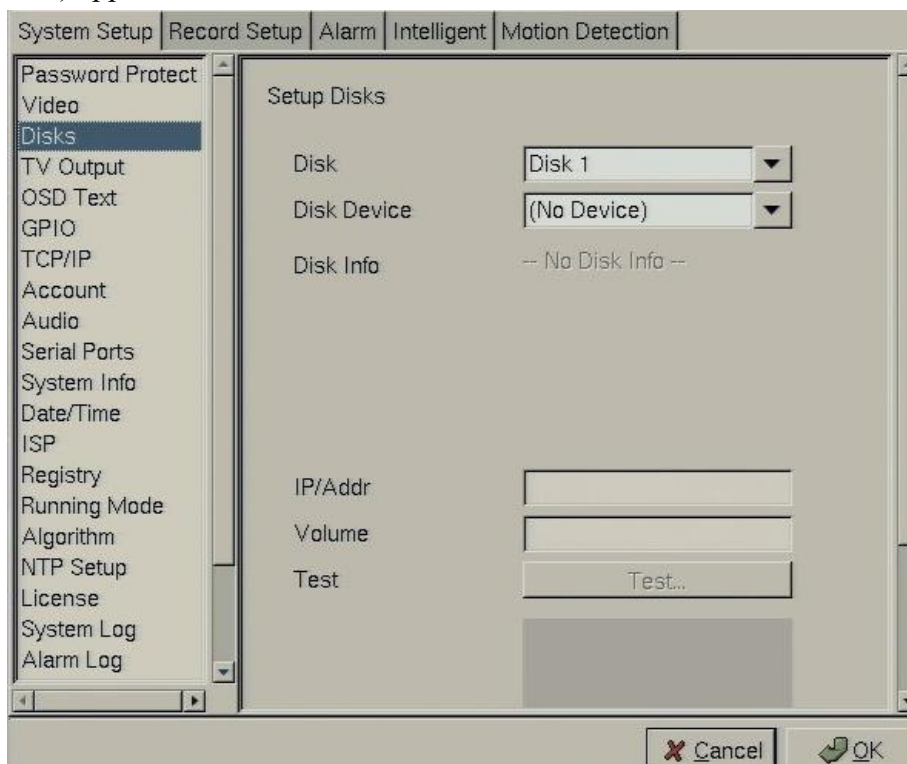
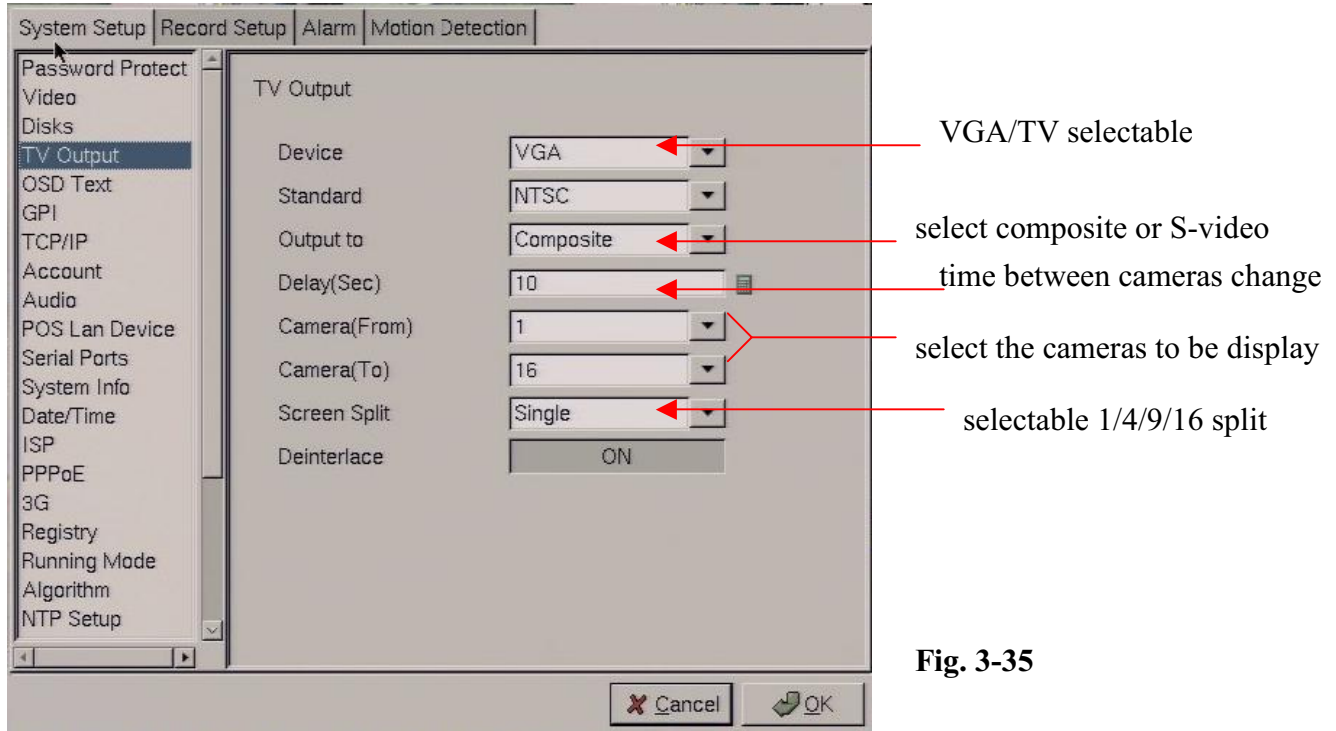


Fig. 3-34

Use keyboard or mouse to enter the IP address and Volume of any connected network disk. Click on the Test button to test if the drive is connecting correctly to AP416 machine.

3.6.4 TV output

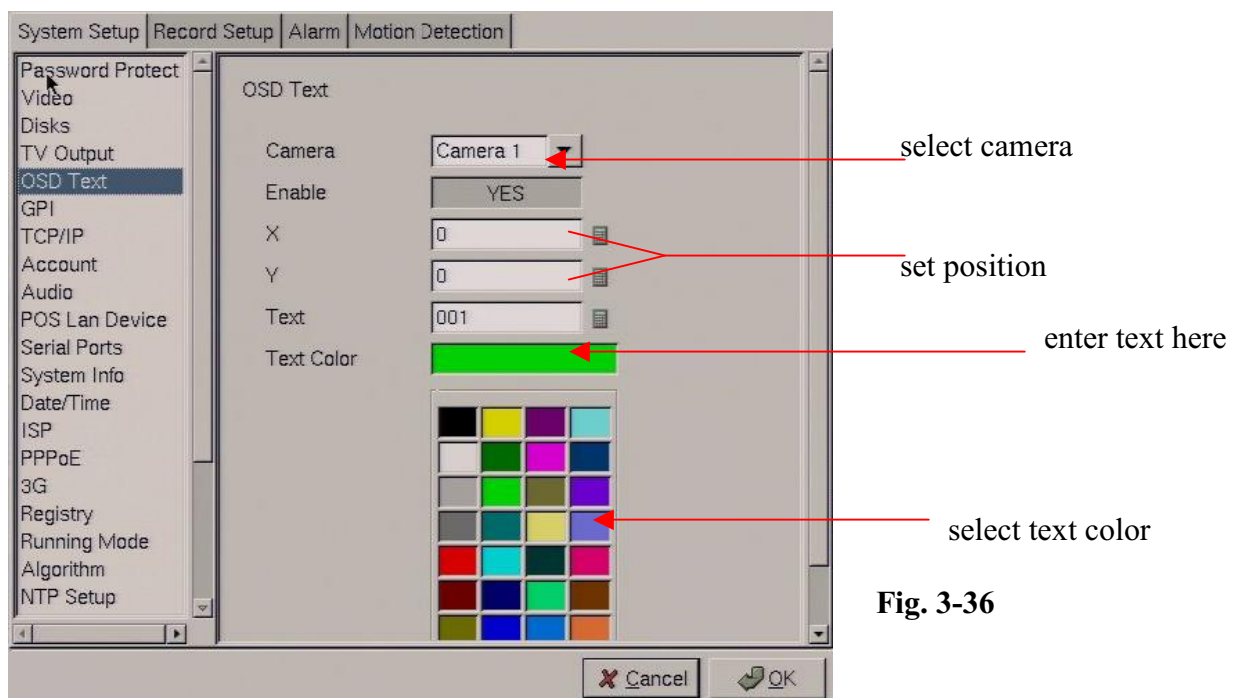
Use the TV Output menu to configure the video output of AP416. It can be standard VGA computer monitors or TV type screens. Set the device type, standard, outputs and other parameters. Set the Camera (From) and Camera (To) options to specify the range of cameras that are displayed in the cyclic display mode. Software based De-interlace support.



Use mouse to set each field. Ensure each field is set correctly before clicking OK. If parameters are set incorrectly it could result in the display becoming unreadable and very difficult to correct.

3.6.5 OSD Text

Use the OSD Text menu to assign text for each camera. This makes it easier to refer to cameras by their names.



To set up the OSD text:

1. Select the desired camera from the Camera drop-down box.
2. Click the Enable field to display the text.
3. Adjust the position of the text display on the image using the X and Y parameters. A value of X=0 and Y=0 would result in the text appearing at the top left corner of the camera image. Increasing the value of Y moves the text down the screen. Increasing the value of X moves the test the right. Enter the text to be displayed in the Text field.
4. Enter text you want to put on that camera view
5. You can select the text color
6. Click OK to save changes.

3.6.6 GPI

The GPI (general purpose input) menu enables you to view the status of the input devices such as switches, sensors.. etc. When the switches or sensors change state, the GPIs show the status of these input devices. The GPI devices can be NC (normally closed) or NO (normally open) as the state when they are not activated. A GPI that is set at “N.O.” on **Fig. 3-37**, becomes activated when it is closed. These status change, can be seen on **Fig. 3-5**.

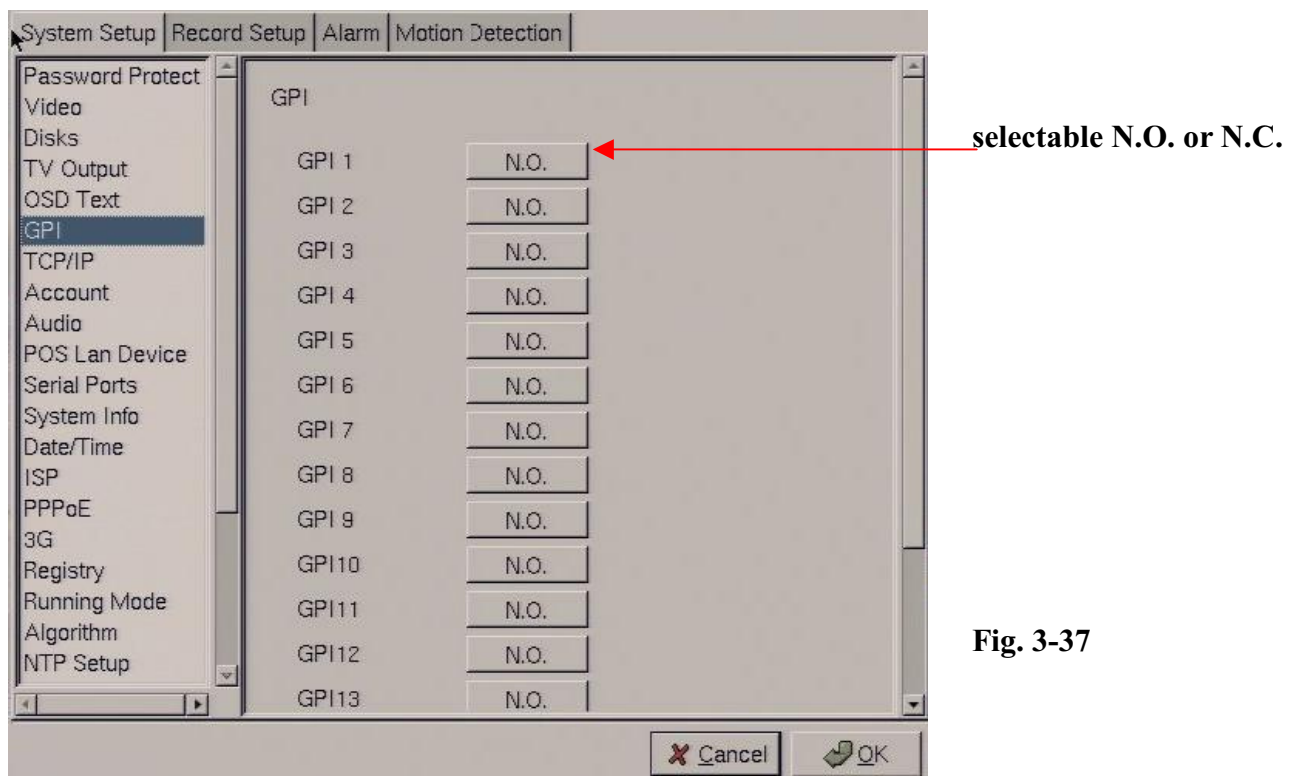


Fig. 3-37

3.6.7 TCP/IP

There are two Network Devices on this setting. That means AP-5004 machine can support max. 2 network interface cards. Normally, one is enough and that is the standard delivery of AP-5004. If customer wants to add one more network interface for any reason, he can do that with proper setting here.

Gateway and DNS IP are necessary if you want the camera videos of this AP-5004 can be access from remote PC client through Internet. If you change HTTP port other than “80”, you will need to

tag the port number following IP address of the unit. Consult your network manager if you don't understand how to do.

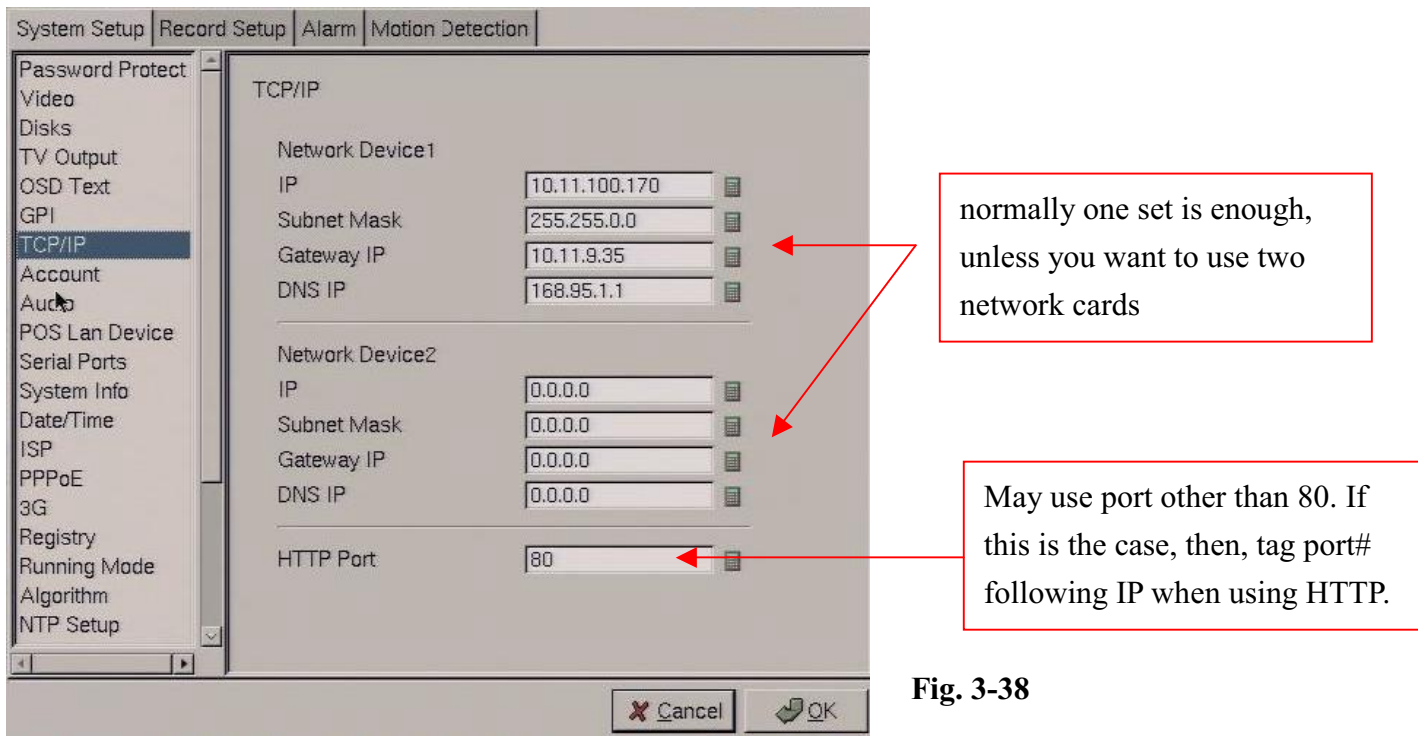


Fig. 3-38

3.6.8 Account (for remote ONLY)

Use the Account menu to set up the administrator as well as User name and password. The accounts configured here are all for remote access ONLY. Max. **256 additional remote access authority users'** password, permissions can be configured on the system. Select the user number and assign a Name and password to it. Click the PTZ, Playback, and Audio fields to enable access to these properties for the selected user. Select the cameras that you want the user to have access to and set them to **Yes**.

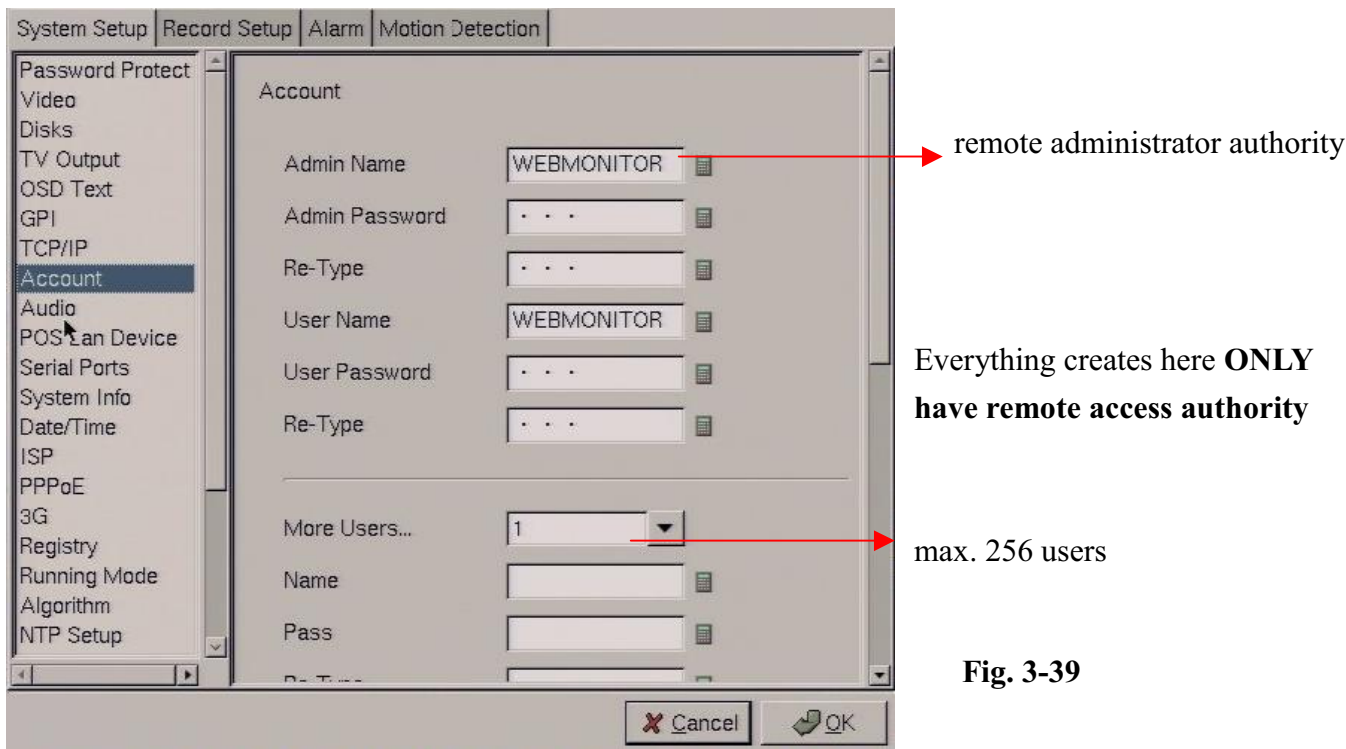


Fig. 3-39

3.6.9 Audio

Mic Gain – Adjust microphone input signal level,

Speaker – For speaker volume adjust

Mic Timeout and Speaker Timeout – Time out period setting for remote access.

Self Test – Local test from microphone to speaker.

Camera n – Select audio source that is to relate with the camera. AP-5004 has ONLY one audio source from mother board, so you have ONLY one choice here.

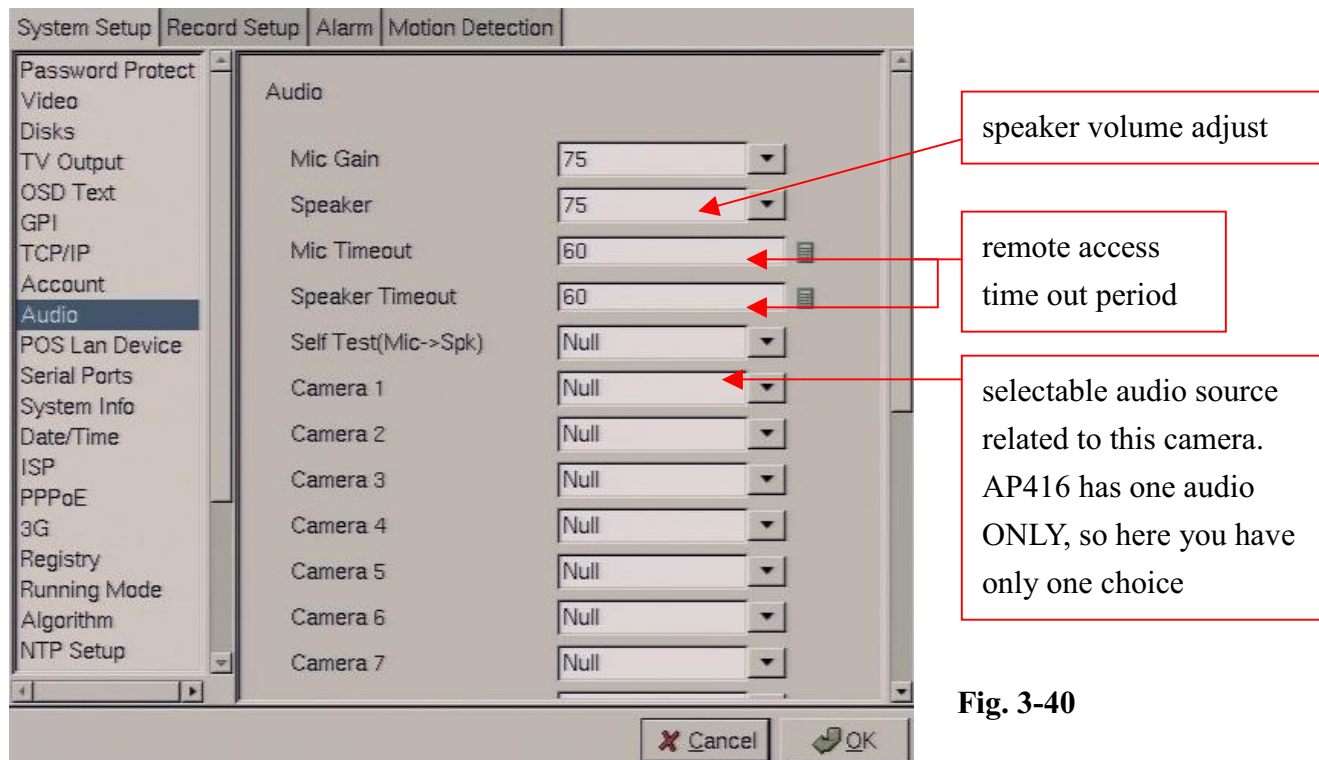


Fig. 3-40

3.6.10 POS Lan Device (This function is NOT available on firmware version MDVR 2.0)

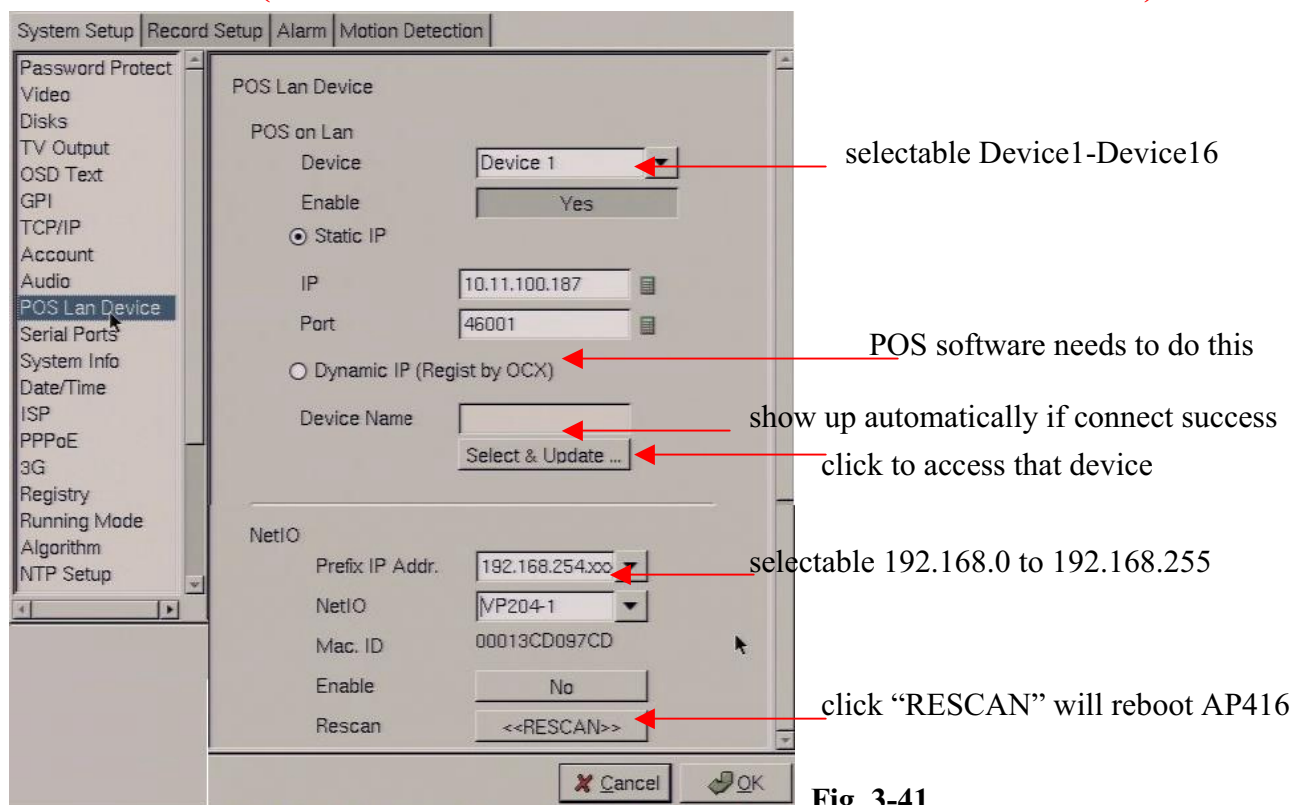


Fig. 3-41

AP416 can receive POS text from LAN port. There are two methods:

3.6.10.1 Direct connect – If the POS machine can send out POS text through its LAN Port, then, you can connect it directly to the LAN that AP416 can access it. The configuration procedure is:

3.6.10.1.1 Select POS LAN device – There are 16 devices maximum.

3.6.10.1.2 Select Static or Dynamic IP. When Static IP is selected, key in the IP address and port number of POS machine. When Dynamic is selected, click “Select & Update”, then, if the connection is OK, the “Device Name” will show up automatically. In order to use Dynamic IP, the POS LAN machine needs to include a OCX registry command in its software for AP416 to recognize it. Please contact support@apeccctv.com for detail.

3.6.10.2 Using AP-204 – AP204 is a RS232 to LAN converter. You can connect its RS232 to POS machine and its LAN port to the hub or switch that connects AP416. The AP-204 units that connect to the same AP416 DVR, should have same IP segment. First, select its IP prefix under “NetIO” section of **Fig. 3-41**. Then, enable and click “Rescan”, AP416 DVR will reboot scan the network to see if there are AP-204 units inside its LAN segment and bring up the MAC ID. Only after this process, you can select the “AP204-X” at “NETIO” field. The IP prefix selected, must NOT be occupied by other AP-204 units group.

ONLY after you finish configure this step successfully, you can then go to “Serial port” configuration of section 3.6.11 to combine the POS LAN device with cameras.

3.6.11 Serial ports

The “Serial port” here includes NOT just the traditional RS232 COM port. It covers AP204, RS232 to LAN converter and POS LAN devices from POS machine that are set up in previous section 3.6.10.

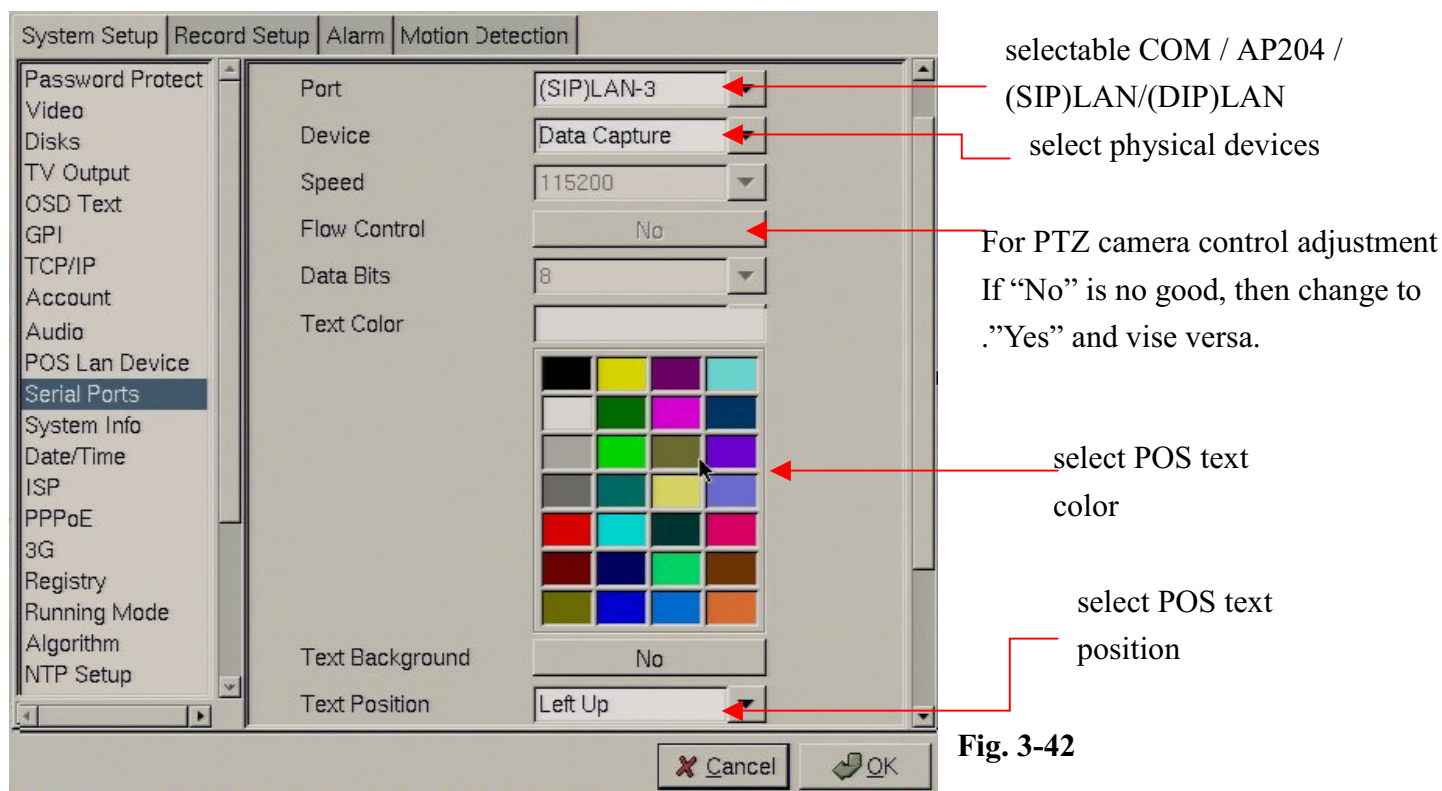


Fig. 3-42

3.6.11.1 Port – You have selections here “COM”, “AP204”, “(SIP)LAN” & “(DIP)LAN”.

COM ports are the COM1 & COM2. On AP-5004, COM2 is RS485 dedicated for PTZ camera control. “AP-204” is the RS232 to LAN converter that you set up at section 3.6.10. Only the AP-204 units that were connected successfully will show up here. (SIP) LAN is the LAN connection from POS machine with “static IP” address. (DIP)LAN is the POS machine with “dynamic IP” connection to AP-5004.

3.6.11.2 Device – Here the selection varies with different categories form “Port”.

When “Port” is COM1 – you have selection of **modem/GPIO/PTZ camera/Data capture**.

When “Port” is COM2 – you have selection of **GPIO/PTZ camera/Data capture**.

When “Port” is AP-204 – you have **Data capture**.

When “Port” is (SIP)LAN or (DIP)LAN – you have **Data capture**.

The meaning of configuration here is you want to connect the “Port” selected to a physical external device. For example, when “Port” is “COM1”, you can connect it to a “modem” or GPIO that has RS232 serial interface. You then will need to set its “speed”, “data bits” as on **Fig. 3-42**. When the “Device” is “Data capture”, that means you are connecting POS machine for transaction text overlay with camera video. You can then select the text color and position on screen. There are 4 positions. “Upper left”, “Upper right”, “Lower left”, “Lower right”. You can also enable the background color of POS text to get better view of POS text when necessary.

3.6.12 System info

This section display many useful and important information which are necessary for AP-5004 health checking and debugging. There is nothing to change here. But you will probably be requested

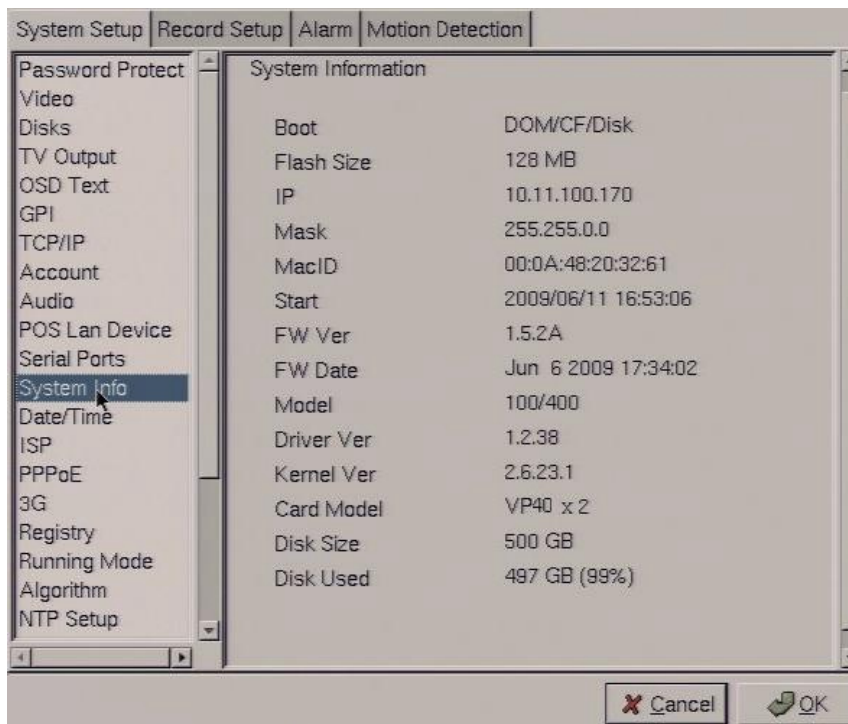


Fig. 3-43

to give the maintenance people these information when the machine is no good. So, it is wisdom to keep a record of this page.

3.6.13 Date/Time

Select your correct time zone at “T.Zone” field. The year/month/date/hour/minute/second also can be configured. **AP-5004 will reboot to the new time zone after click “OK”.**

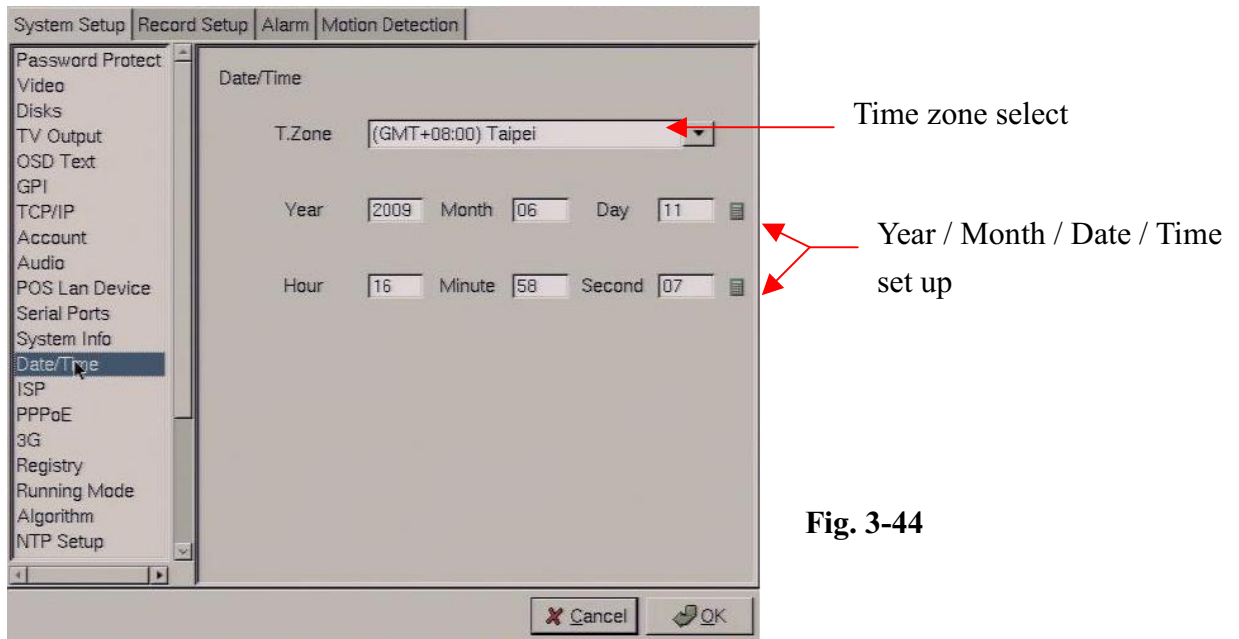


Fig. 3-44

3.6.14 ISP

If you are using dial-up access to the Internet, use the ISP menu to enter the necessary details for login to your Internet Service Provider. The TCP/IP data is assigned by ISP. So, make it automatic here.

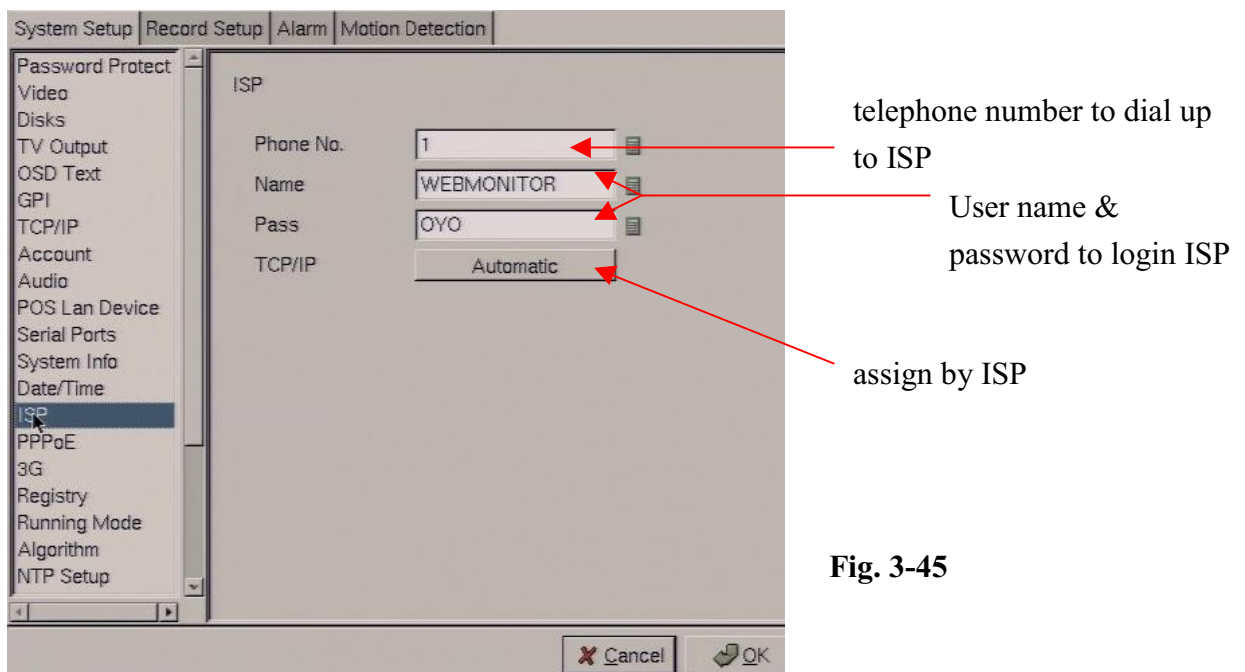


Fig. 3-45

3.6.15 PPPoE

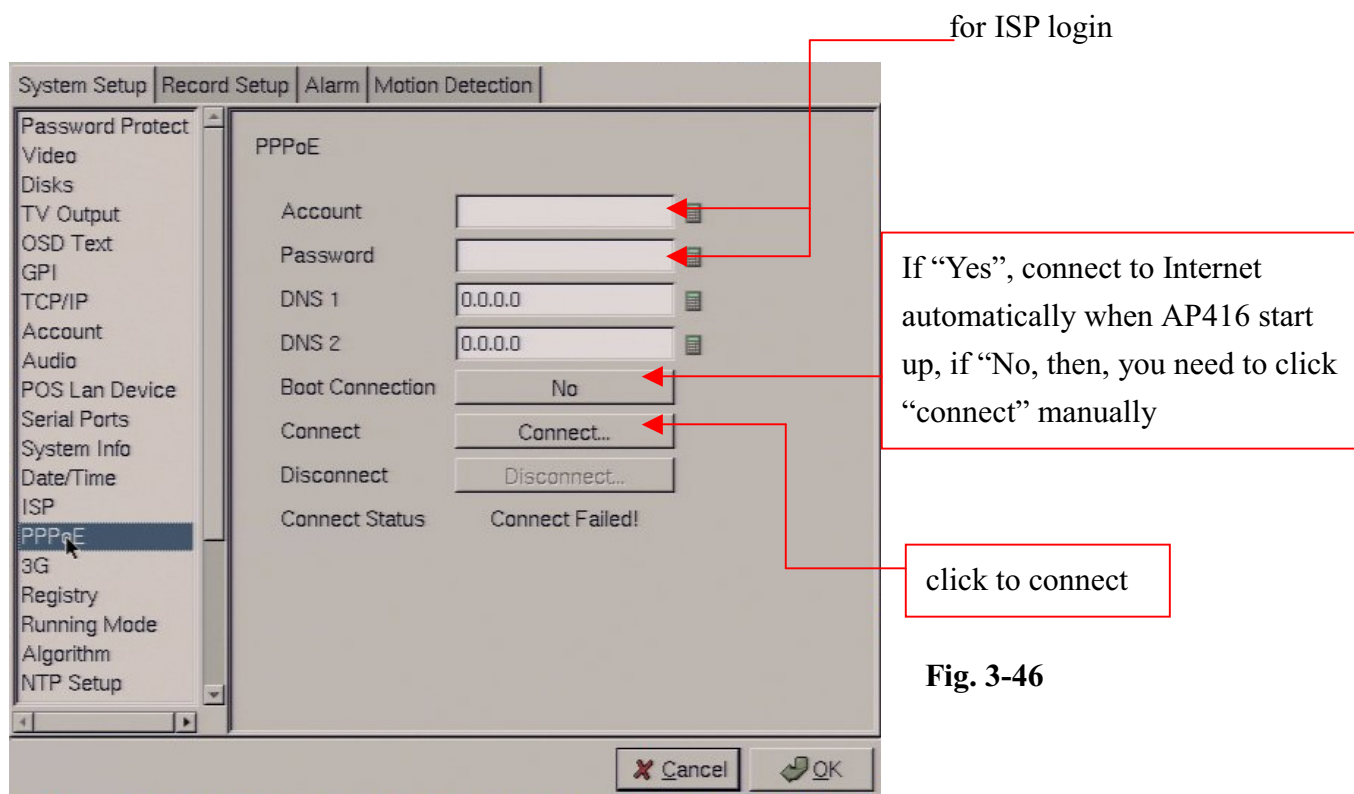


Fig. 3-46

This section provides another way for connecting AP-5004 to Internet. PPPoE uses your existing LAN to dial up to your ISP for Internet service. You don’t need a telephone line here. But you do need an ISP login account name and password. You can set two DNS(Domain Name Server) IP addresses.

If you use URL here, then, you need to set the DNS physical IP correctly at **Fig.3-38**.

You can click the “Disconnect” button to break the Internet connection and the “Connection Status” field shows “Connect succeed” or “Connect Fail”.

3.6.16 3G

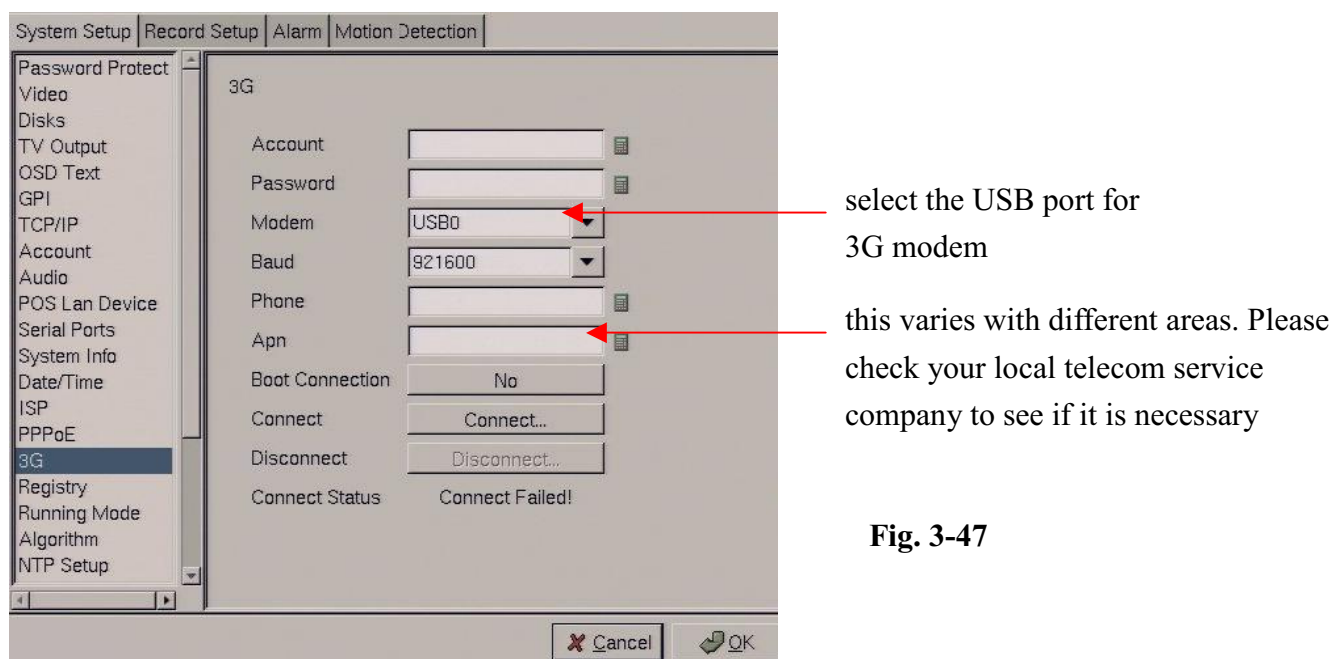


Fig. 3-47

This function enables AP-5004 to connect to Internet through an external USB 3G modem. You need a 3G account for login. Select the USB port of AP-5004 where 3G modem is plugged. Select the baud rate and enter 3G phone number. The “Apn” field varies with different 3G operators. You need to consult your local 3G service provider to get the number. Some areas may not need it for connection. Other buttons are similar to ISP setting as **Fig. 3-45**.

Please refer to chapter 7 Mobile DVR 3G / GPS configuration for more detail.

3.14.15 Registry

This function is useful ONLY when you are using dynamic IP address for the AP-5004 machine when connecting to Internet. The AP-5004 needs to “register” to a “registry server” so that client PC can visit it from Internet. **Please refer to Chapter 5, remote function for detail.** You can set up here the IP address, HTTP port number, registry path here at **Fig. 3-48**. Click “Test...” to see if the registry is done successfully and save the data for “registry server.”

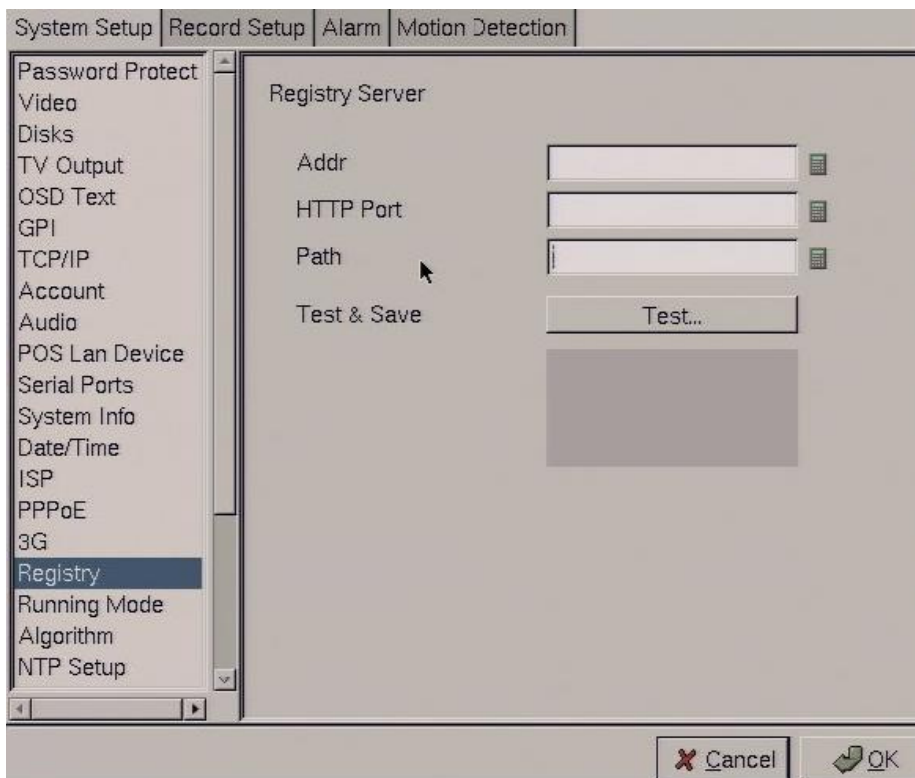


Fig. 3-48

3.14.16 Running mode

On the “Mode” field, you can select “Network” or “ISP” Mode. On the “control” field, you can select “Mouse” or “IR Remote Control” Mode.

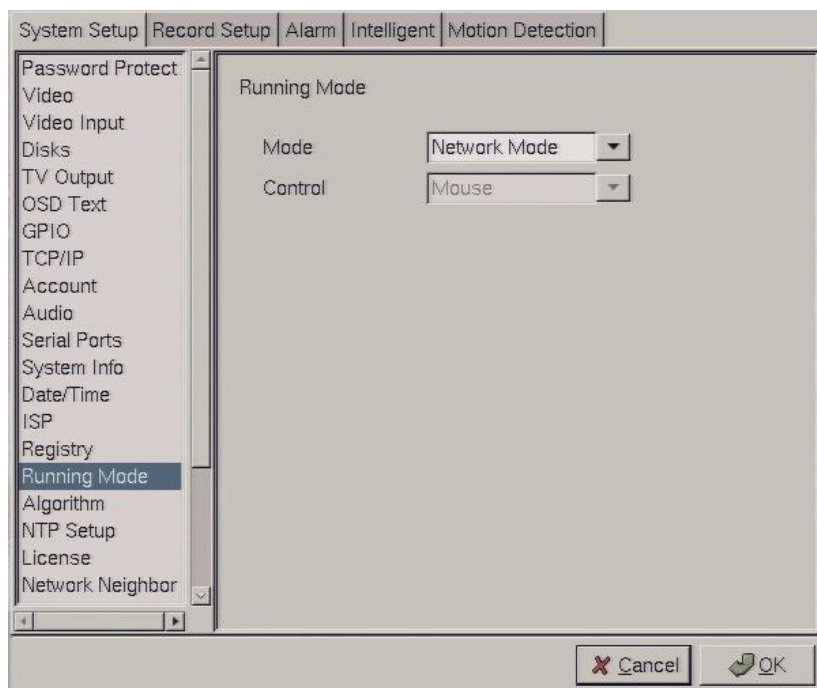
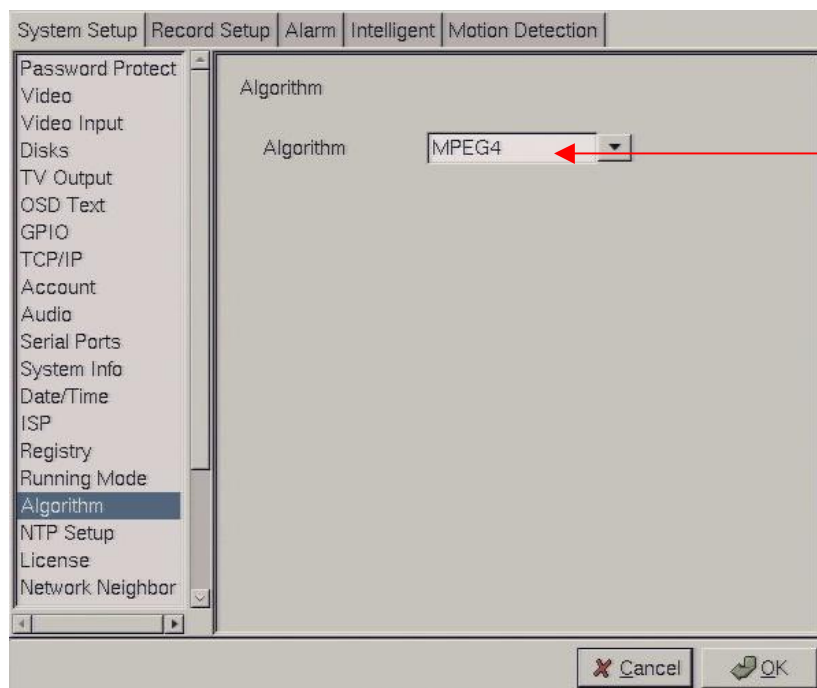


Fig. 3-49

3.14.17 Algorithm

H.263: frame size is small and suitable for Network surveillance. MPEG4: Video quality good and frame size small. JPEG: Video quality best but frame size big.



Selectable MPEG4,
H263,MJPEG, JPEG

Fig. 3-50

3.14.18 NTP setup

This function is used for synchronization the system clock of AP-5004 with a NTP(Network Time Protocol) server. You can set up how many hours you want to do the synchronization. Select a NTP server from the default list. If you don't want to use any one of the NTP server in the list, you can edit it. But after all this, please click "Test..." button to see if the NTP server connects to your AP-5004 successfully.

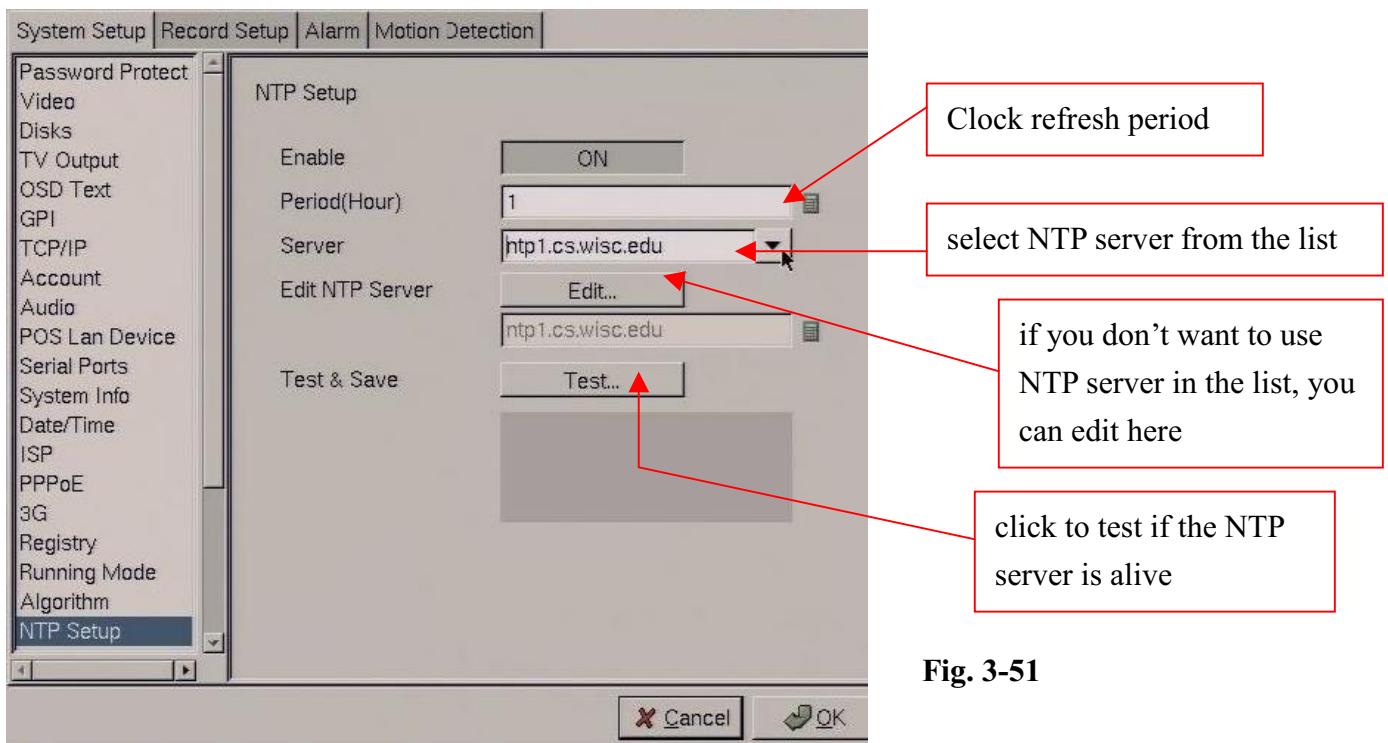


Fig. 3-51

After making the changes, click on the Test & Save button to verify that the server is operational. Click **OK** to save changes.

3.14.19 License : (POS function is NOT available on firmware version MDVR 2.0)

- There are two ways to grant POS license. One is key-in license key; the other one is plug-in a key-pro. So if you plug-in a key-pro you don't need to key in the license number again on **Fig. 3-52**.

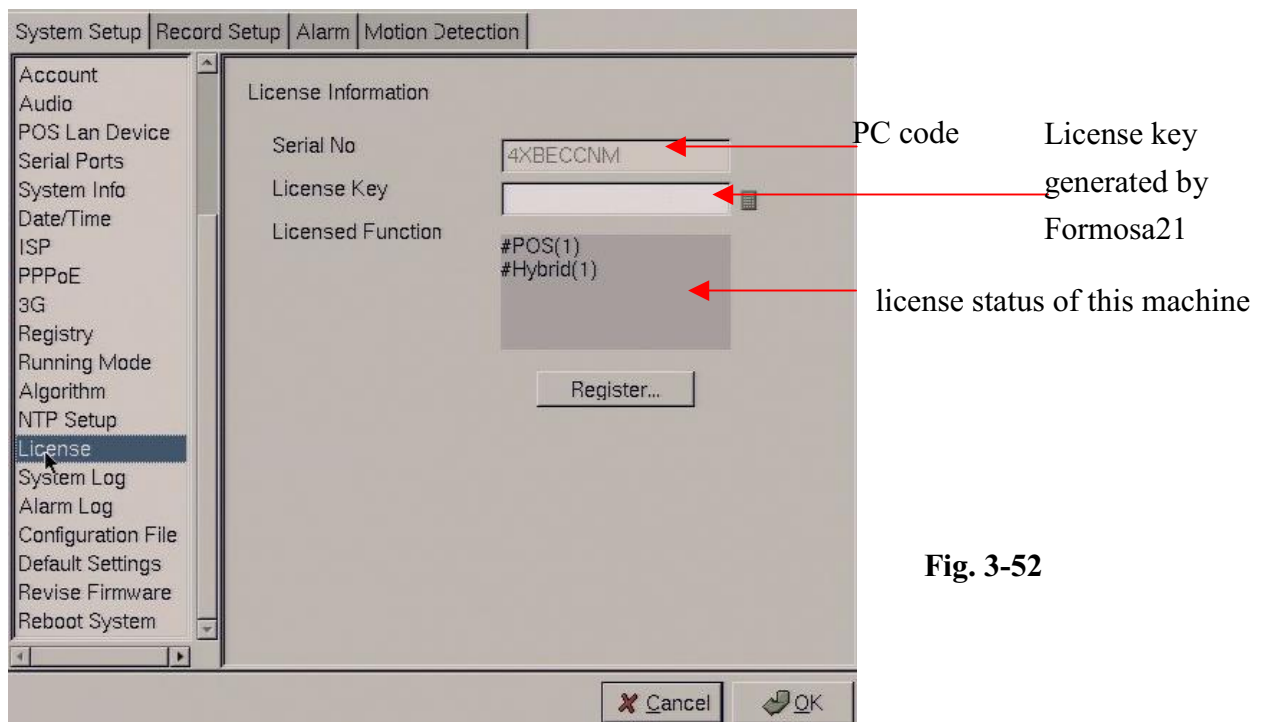


Fig. 3-52

There are three POS License to three levels:

Level 1: Single POS unit – Can connect **ONLY** one cash register.

Single POS only one cash register. This level pos function doesn't need to register.

Level 2. 4 POS units – Can connect maximum 4 cash registers.

Level 3. Full functions – Can connect maximum 16 cash registers.

The Hybrid license can be max. 16. After key in the “License key”, click “Register...” to complete the process.

3.14.20 System Log

System log includes operations performed at local VGA screen and remote operations. User can search system log by year/date/time. Not all operations have log.

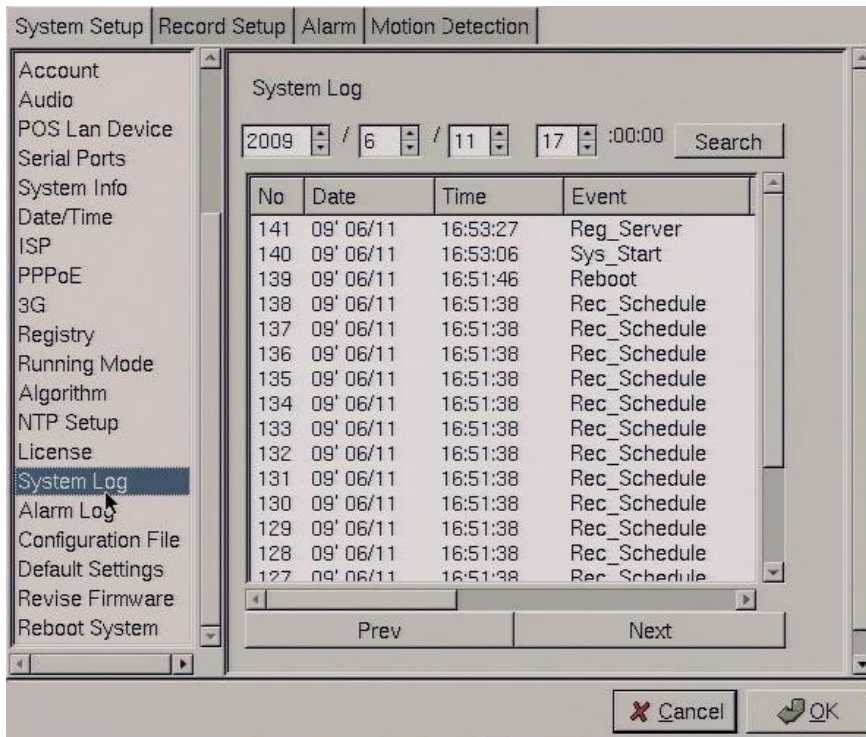


Fig. 3-53

3.14.21 Alarm Log

Any alarm will be written into alarm log including motion trigger 、GPIO trigger 、Disk error 、Video loss 、POS event.....etc. User can search alarm log by specific time.

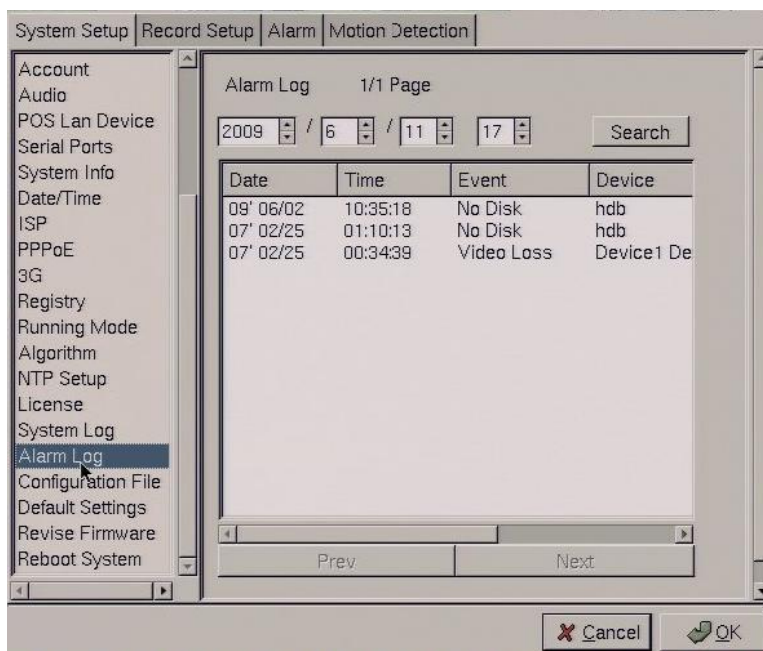


Fig. 3-54

3.14.22 Configuration File:

You can backup or restore system configuration into a file for future restore in case of something wrong that causes loss of configuration, or restore it to another machine in case it has similar functions.

Backup configuration data:

1. Connect a USB flash to DVR for backup or restore configuration data. DVR will auto detect flash.
2. Select backup section and click a device, which is shown in the field.
3. Click **“Backup”** button to start to backup configuration data.
4. When user sees **“vpcfg _ your DVR name _ Mac ID.bin”** was saved in the field, it mean the backup was done.
5. Click **“ok”** button to leave system setup menu.

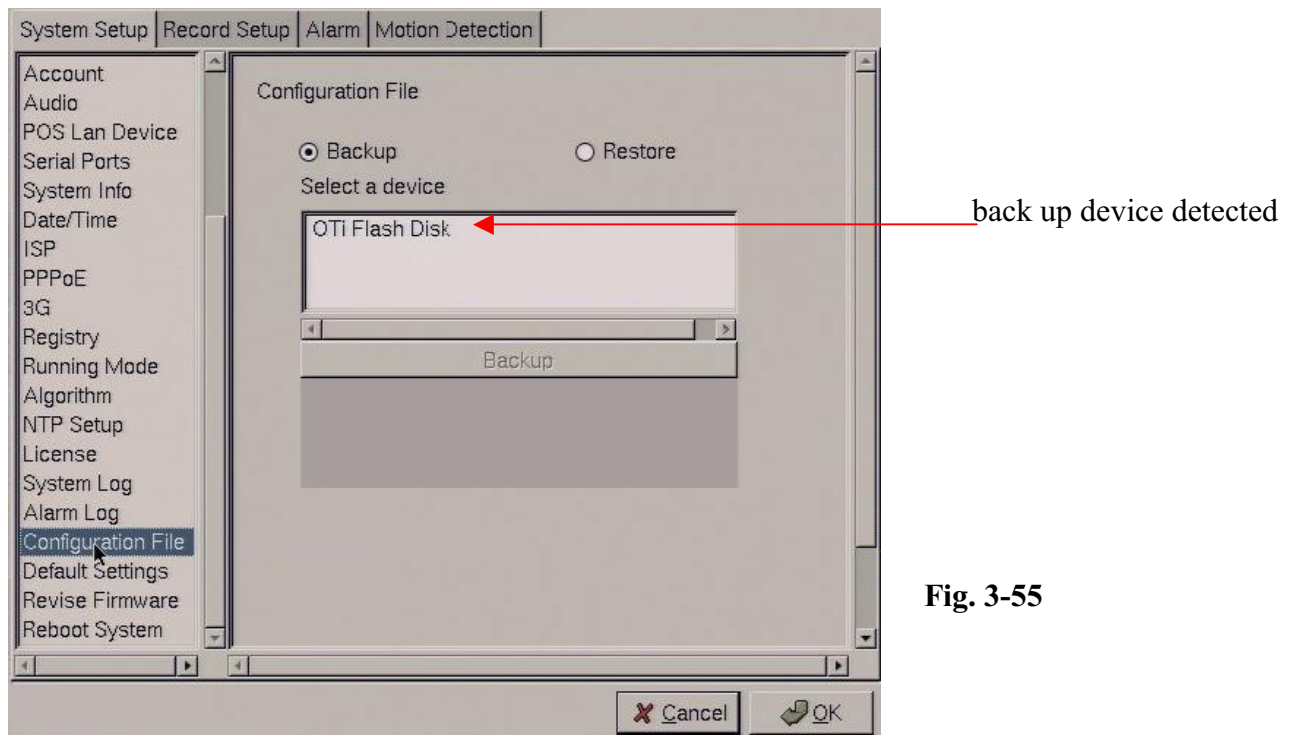
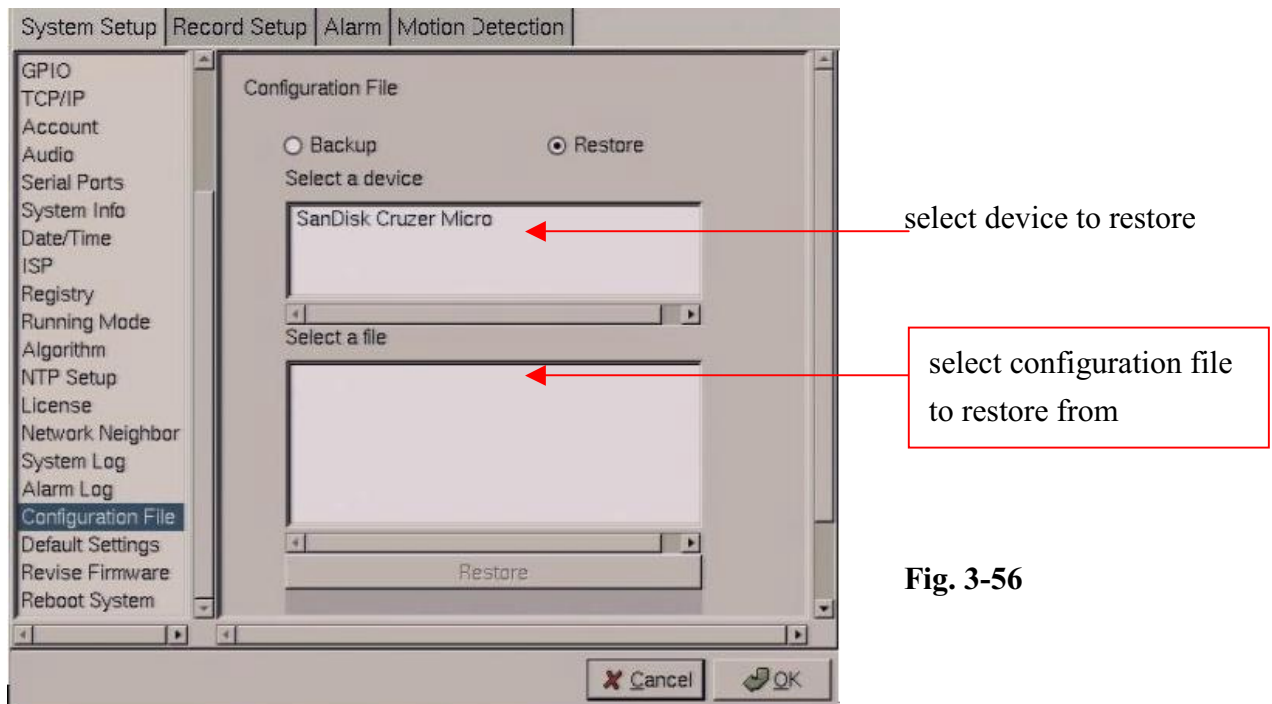


Fig. 3-55

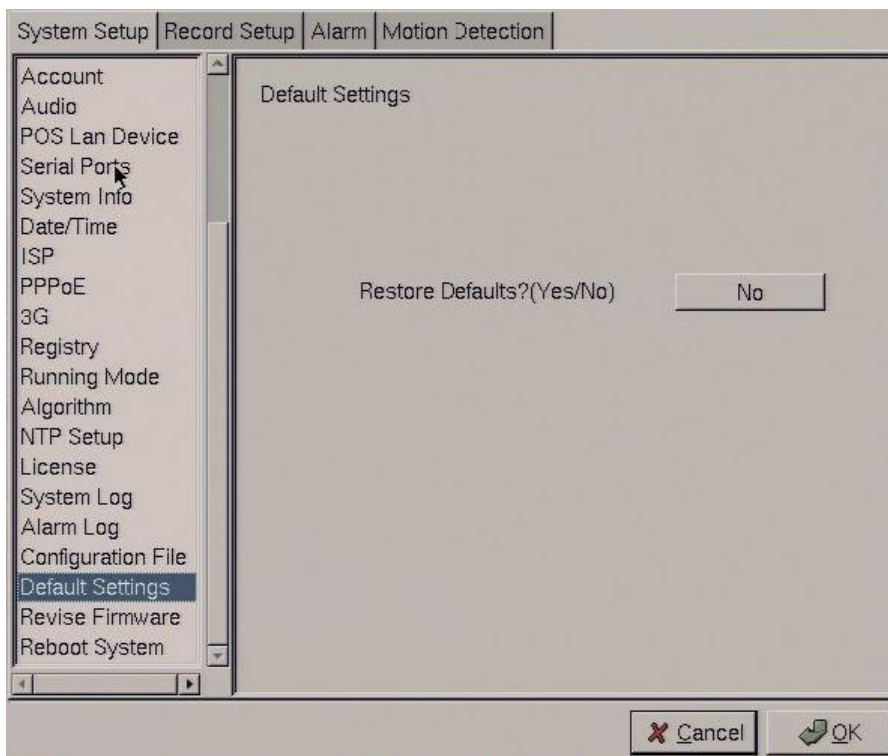
Restore configuration data:

1. Select restore section and click a device, as **Fig. 3-55**
2. Select one **“*.bin”** in the field.
3. Click **“Restore”** button will pup-up a menu to ask you to over write data. Select “ok” to start to restore configuration data.
4. When restore data action was done, system will ask you to reboot DVR. Press “ok” to reboot DVR.
5. After restart DVR, user will get the configuration setup data back.

**Fig. 3-56**

3.14.23 Default settings

Select “Yes” here and click “OK” button to restore default setting to AP-5004. The default administrator name and password are “webmonitor” and “oyo”. Default IP address is 192.168.10.10.

**Fig. 3-57**

3.14.24 Revise firmware

Here you can do firmware revise from local VGA screen as **Fig. 3-58** below. You can put the firmware binary file in a VCD/DVD or USB HDD. You will be asked to select the device that is to be used for revise firmware. Select the device and firmware file, then click “OK” to start the process. After completed, the machine will do reboot into new firmware.

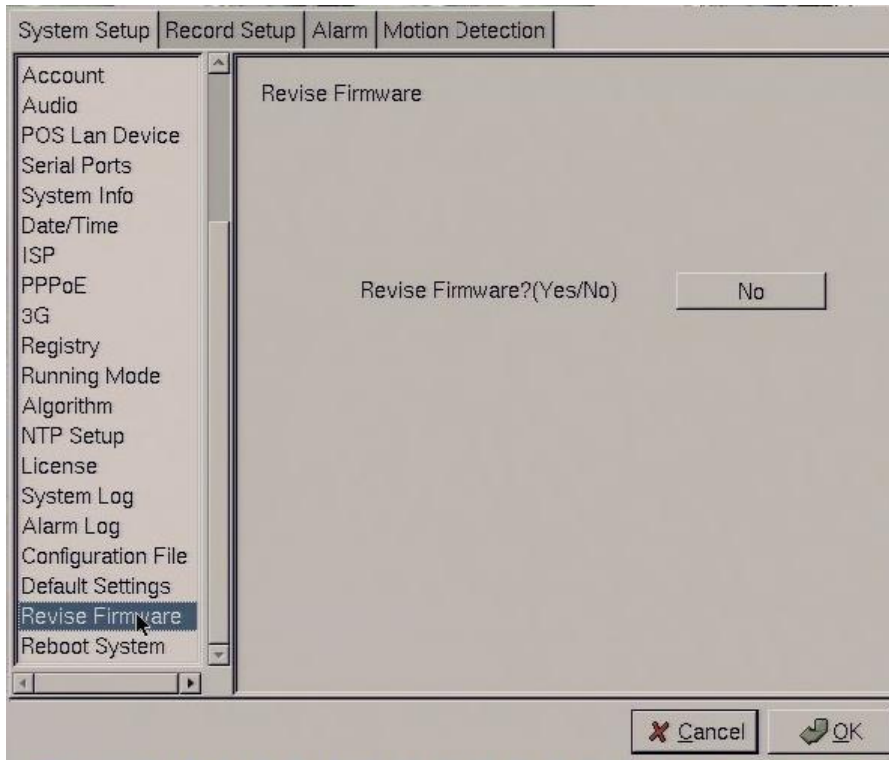


Fig. 3-58

3.14.25 Reboot system

“Shutdown” turns off the power and “Reboot” only re-start the machine from beginning, does NOT turn it off physically. You can select either one and click “Yes”.

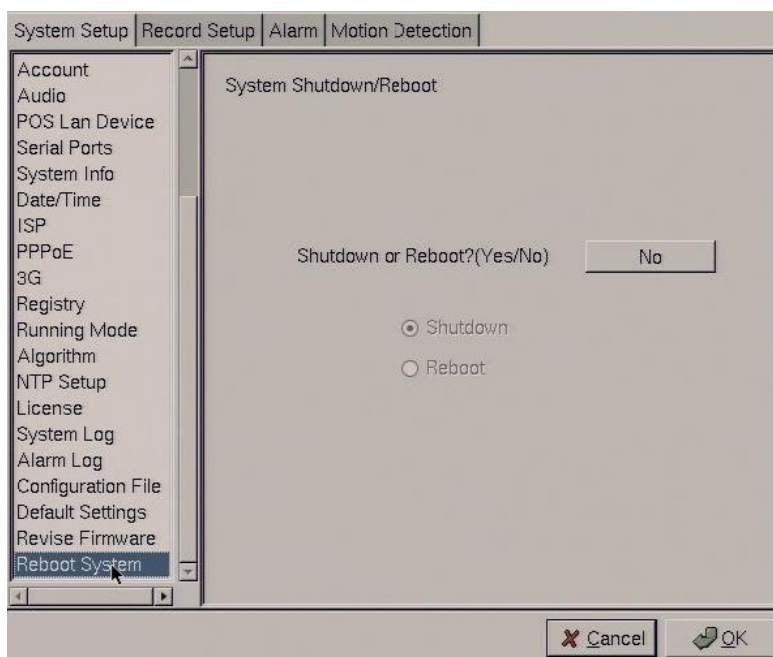


Fig. 3-59

3.15.1 DVR setup

Use the DVR menu under the Record Setup tab to set the Digital Video Recorder parameters.

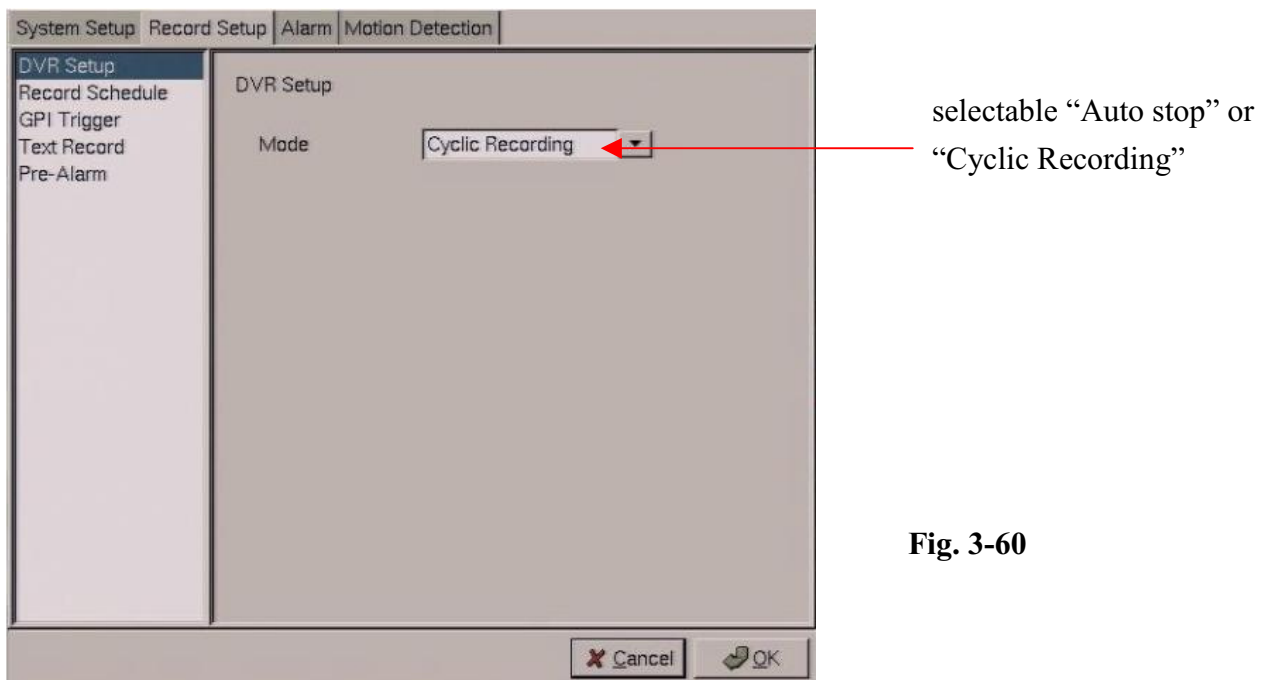


Fig. 3-60

Select either Auto Stop or Cyclic Recording. Auto Stop recording stops when disk space runs out. Cyclic Recording continues to record until disk space runs out and then overwrites the oldest records. Click OK to save changes.

3.15.2 Record schedule

On Fig. 3-61, weighted recording is for setting special recording frame rate when event triggers.

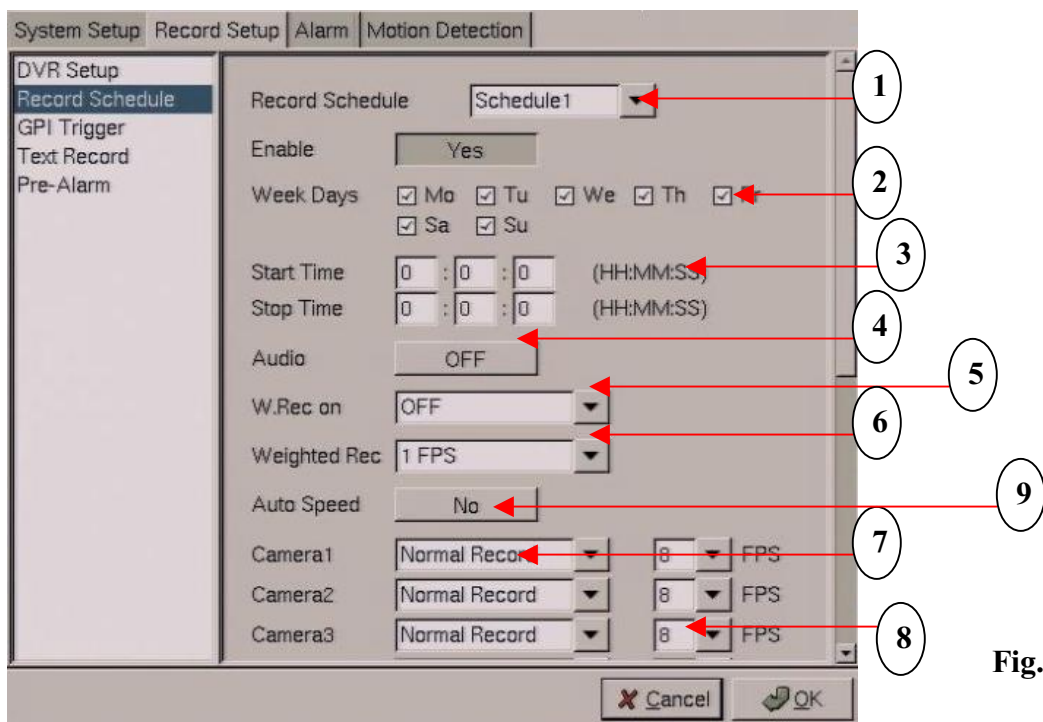


Fig. 3-61

Other selections are as below:

3.15.2.1 Select Schedule –You can set up to 16 record schedules here but ONLY those which “Enable”

as “Yes” are activated.

3.15.2.2 Recording days – Click the week days to select the days for record

3.15.2.3 Recording period – Key in the start and stop time to record.

3.15.2.4 Audio recording – Click “Yes” to record audio

3.15.2.5 Weight recording – “Weight recording” is a feature that records at higher frame rate when something happens. Normally, if nothing happens, you can record at lower frame rate to save disk space. But when event triggers, you want to record faster so that you can see more detail. Select “Yes” to enable this function.

(This function is NOT available on firmware version MDVR 2.0)

3.15.2.6 Weight recording frame rate – Set the frame rate you want for weight recording. If more than one event happens at the same time, the sum of the frame rate set is limited to total system frame rate.

(This function is NOT available on firmware version MDVR 2.0)

3.15.2.7 Camera recording mode – Selectable “No”, “Normal”, “Motion”, “Alarm”, “Motion+Alarm”, “POS text”, “Intelligent” here. Please be noted, in “Motion+Alarm”, the “+” means logically “OR”. That means, either motion detected or alarm trigger, will make the camera record.

3.15.2.8 Camera recording frame rate – You can select recording frame rate for each camera. But the sum of these frame rate should NOT exceed system total frame rate of AP-8100. And this function is activated ONLY when “Auto speed” is set at “No”.

3.15.2.9 Auto Speed – When select “Yes”, recording frame rate of each camera is adjusted automatically by AP-8100 firmware. If “No”, then, you can set for each camera, based on the above **3.15.2.8**

3.15.3 GPI Trigger

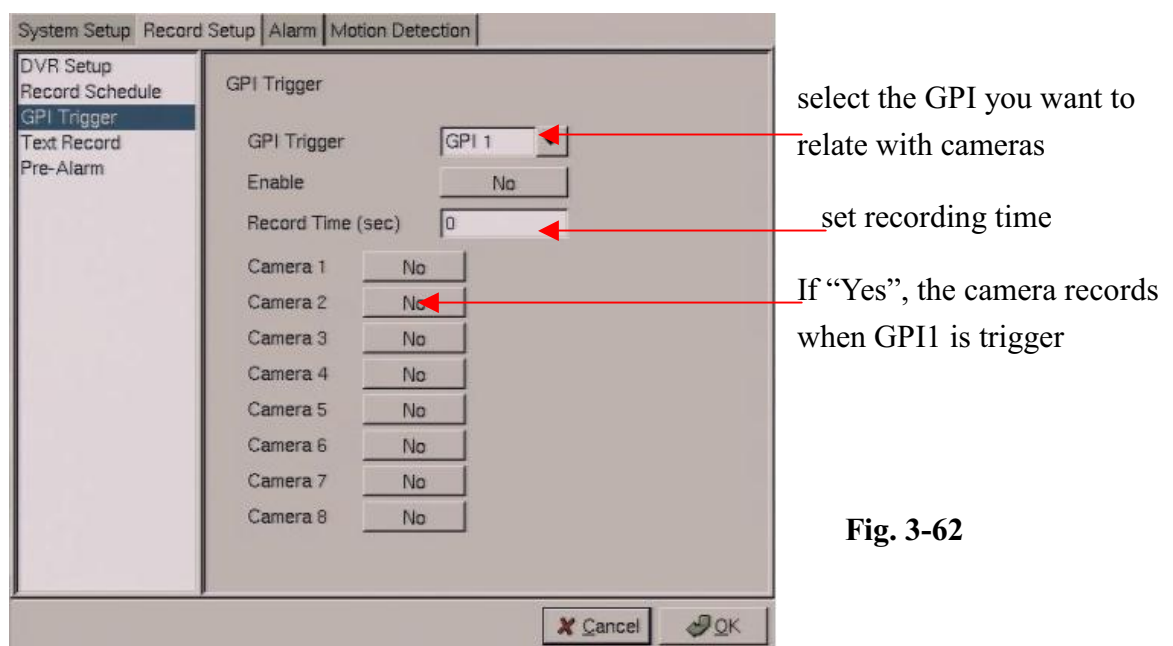


Fig. 3-62

On **Fig. 3-62**, you relate camera recording with GPI trigger. AP-5004 can have max. 16 GPI . The trigger of each GPI can relate to the recording of multiple cameras based on your selection. You can

set up the recording time for how long you want the cameras to record after GPI trigger. Remember to make “Enable” as “Yes” to activate this function and click “OK” to save the configuration.

3.15.4 Text recording (This function is NOT available on firmware version MDVR 2.0)

This function is particularly for POS integration. If you don’t have POS machine connect to AP-5004, you can skip this section.

There are two selections for each camera, “POS event” and “Text”. “POS Event” is defined at “Alarm” set up section. This refers to some kind of special characters from POS machine. “Text” means as long as there is character data from POS, don’t care what it is. You can also set how long time the cameras to record at the “Record Time” field.

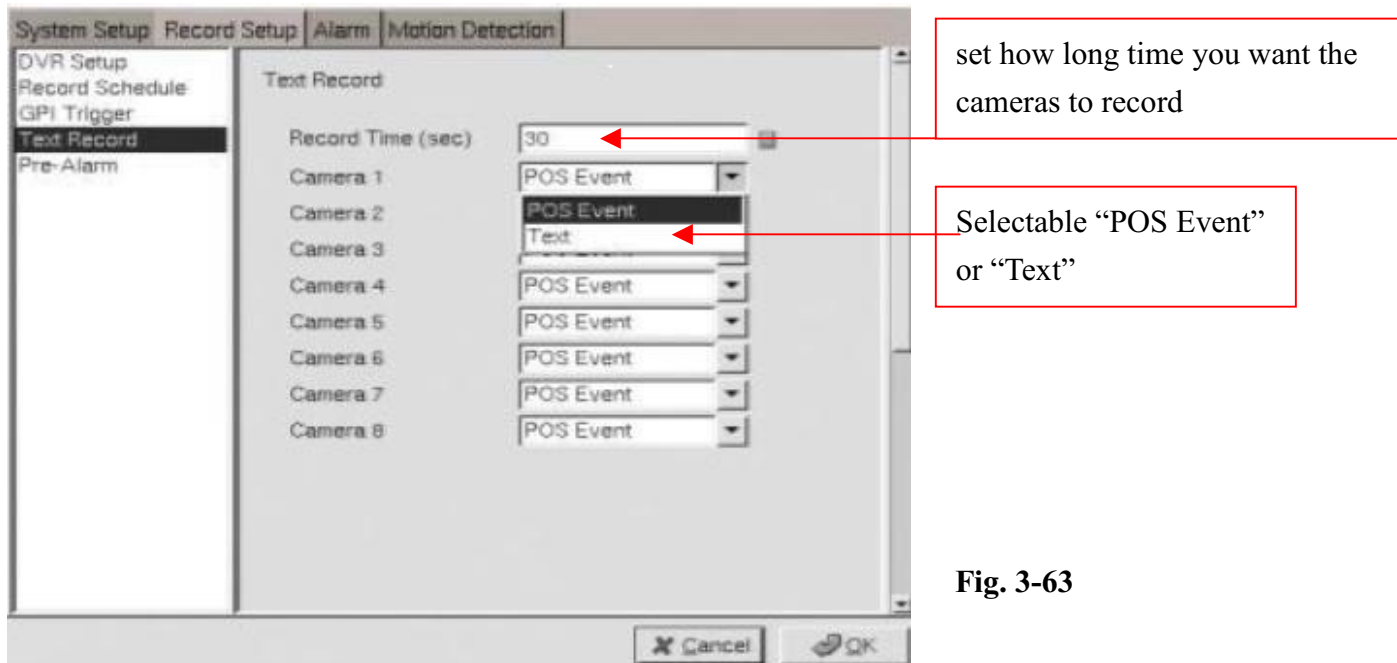


Fig. 3-63

3.15.5 Pre-alarm recording (This function is NOT available on firmware MDVR 2.0)

When alarm happens, the cameras can record ahead of the alarm max. 300 frames. You can set the number of frames you want each cameras to record , as Fig. 3-64.

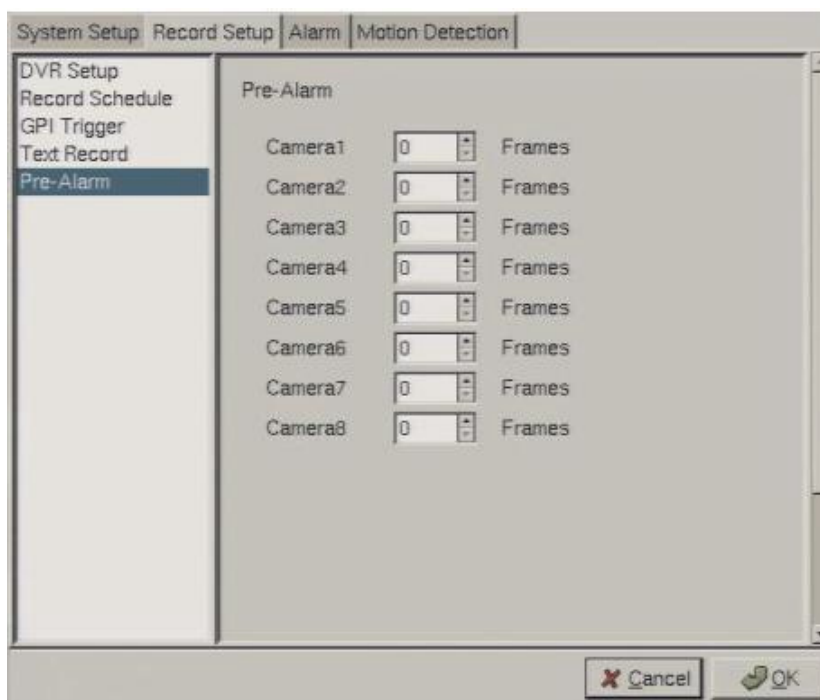
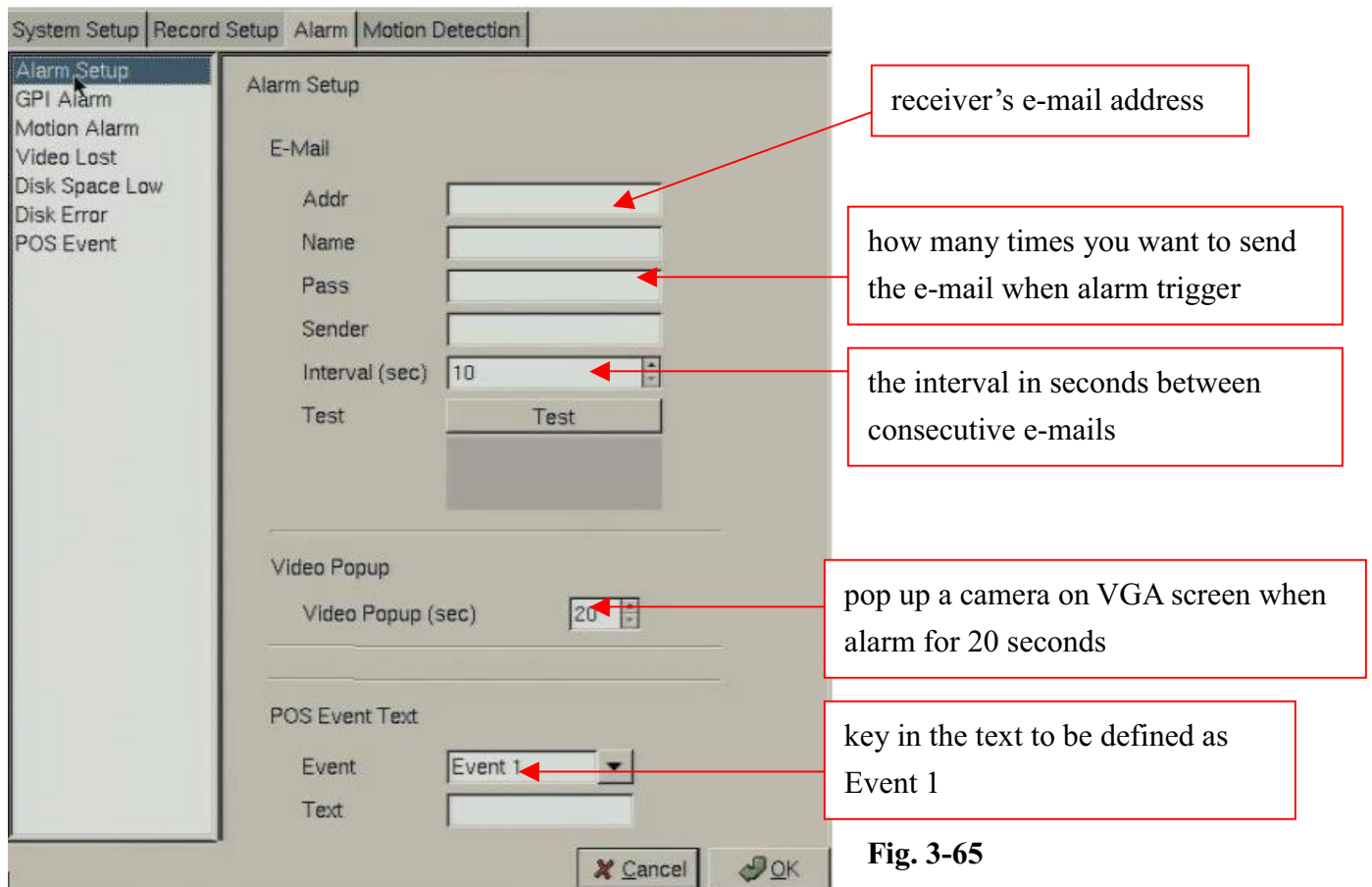


Fig. 3-64

[Alarm]**3.16.1 Alarm setup**

The fields set up here at Fig. 3-64 apply to all kinds of alarms except the POS Event Text, which is dedicated to POS integration. Click “Test” button to test if the e-mail can be sent successfully.

**Fig. 3-65****3.16.2 GPI Alarm**

At Fig. 3-66, you define the actions when GPI1 triggers. “Message” means, show alert text on VGA screen. “Beep” is to alert with audio. “Video Popup” is to pop up the camera video which relates to

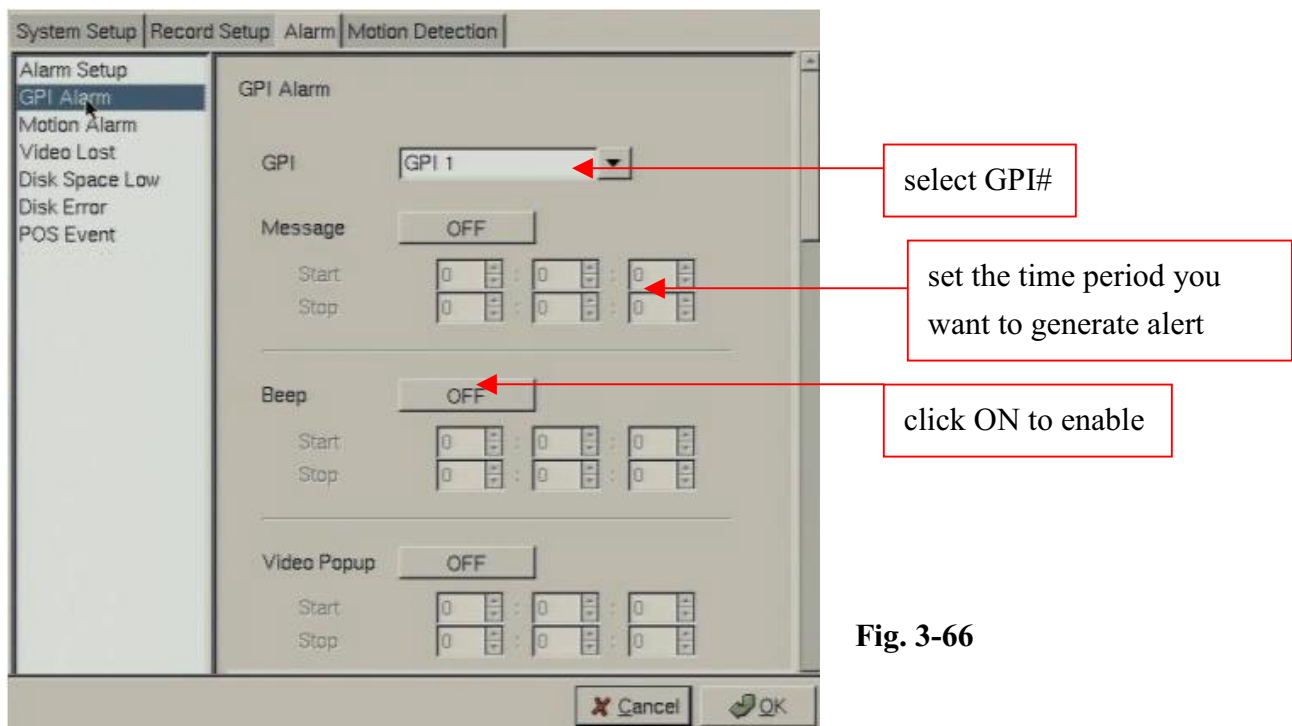


Fig. 3-66

GPI 1 on VGA screen, GPI#1 is related to camera#1, GPI#2 relates to camera#2,...and so on.

3.16.3 Motion Alarm

Fig. 3-67 let you set up the motion alarm generates from a specific camera. The setting is similar to **Fig. 3-66** except the camera selection.

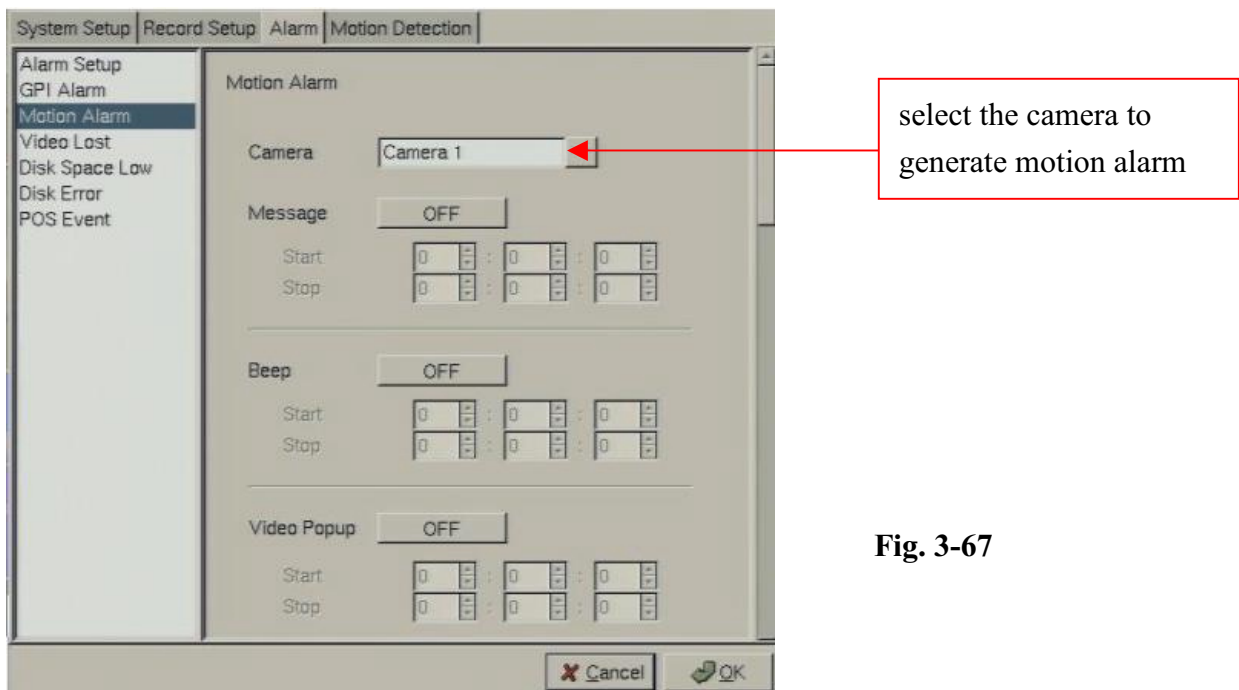


Fig. 3-67

3.16.4 Video Lost

This alarm triggers when AP-5004 detects there is no video from the camera that connects to it. Only “Beep” alert can be set. Select the camera# and others are the same as **Fig. 3-67**.

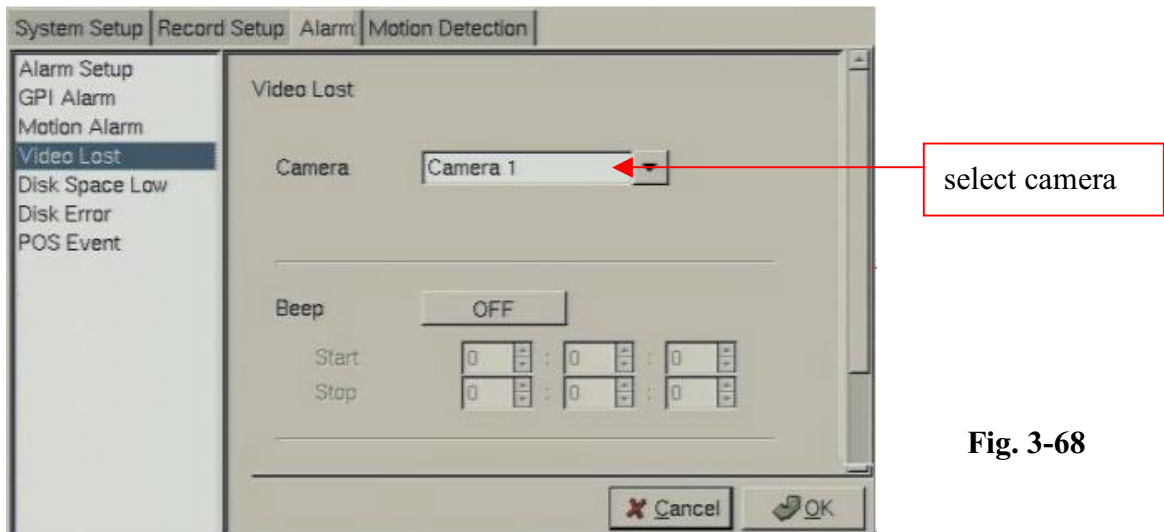


Fig. 3-68

3.16.5 Disk Space Low

This alarm is valid ONLY when you set “Auto stop” at section 3.15.1 It triggers when the disk space is full. So that customer can do proper actions to back up or change disks. “Message”, “Beep” alerts and sending e-Mail can be configured.

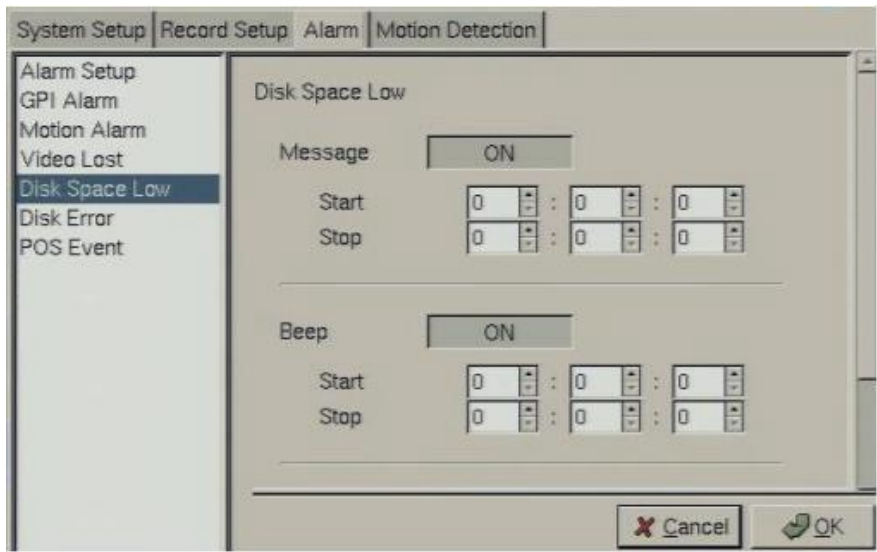


Fig. 3-69

3.16.6 Disk Error

This alarm triggers when AP-5004 detects disk error. That means AP-5004 can not access, read or write to the disk. Pop up message on VGA screen or audio beep alert can be enabled. Setting is similar same as Fig. 3-66.

3.16.7 POS event: (This function is NOT available on firmware version MDVR 2.0)

This alarm triggers when “POS Event” happens. The POS Event text was defined at Fig. 3-63

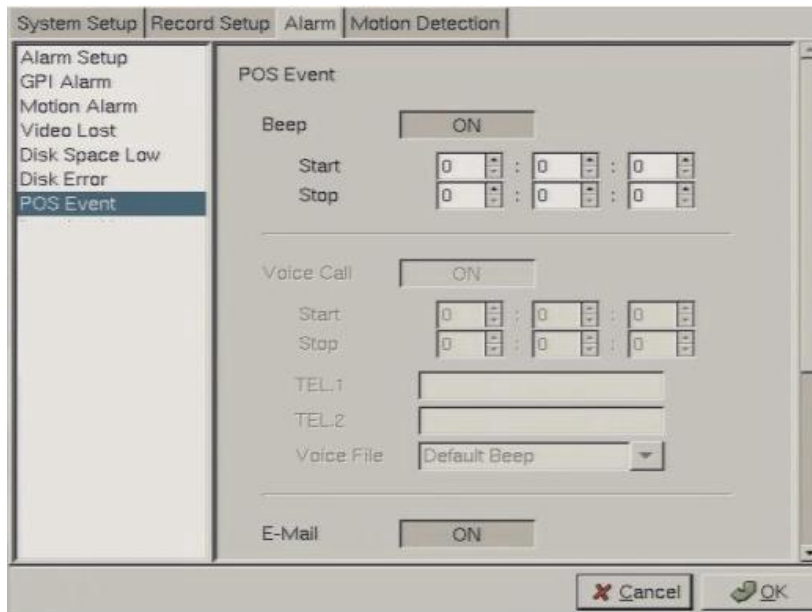


Fig. 3-70

Note: The text was captured from the POS machine; you should check what text will be sent from the POS machine, then set appropriate text in POS Event.

3.17 Motion Detection

You can set up Motion detection parameters for each camera on the screen of **Fig. 3-71**

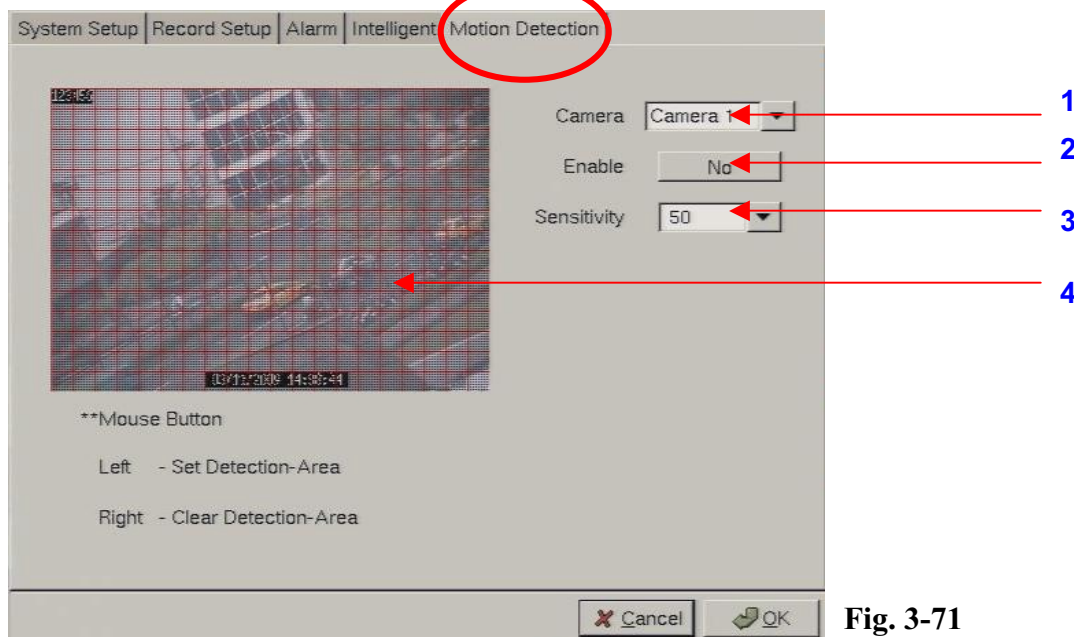


Fig. 3-71

Fig. 3-71

The Procedure is :

1. Camera: Select the camera you want to do configuration.
2. Enable (Yes/No): Turn On/Off the motion detection function.
3. Sensitivity: Select sensitivity level default value is 50.
4. Use mouse drag on the screen and left click to set the detection area. Right click to clear the detection. Or you can left click the small square rectangles to enable or right click to clear the detection areas. Click **OK** to save changes.

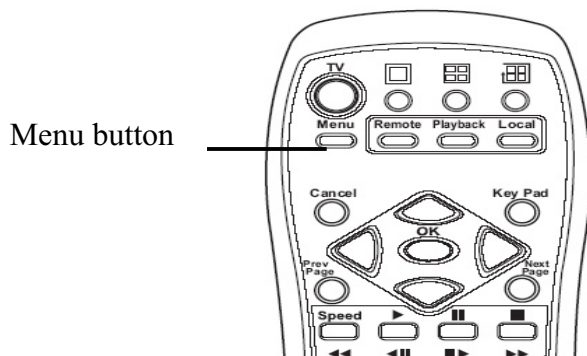
Chapter 4. IR Remote Control Operation

4.1 Introduction

This chapter covers remote control operation using IR remote controller. The AP-5004 must be in IR remote control running mode for this operation.

4.2 Main menu

Press the **Menu** button on the remote control to display the main menu on screen.



```

Menu
-----
System Setup
Record Setup
Playback
Maintenance
System Shutdown
  
```

Use the **Up** and **Down** arrow buttons to select one of the four options and press **OK** button to confirm your choice.

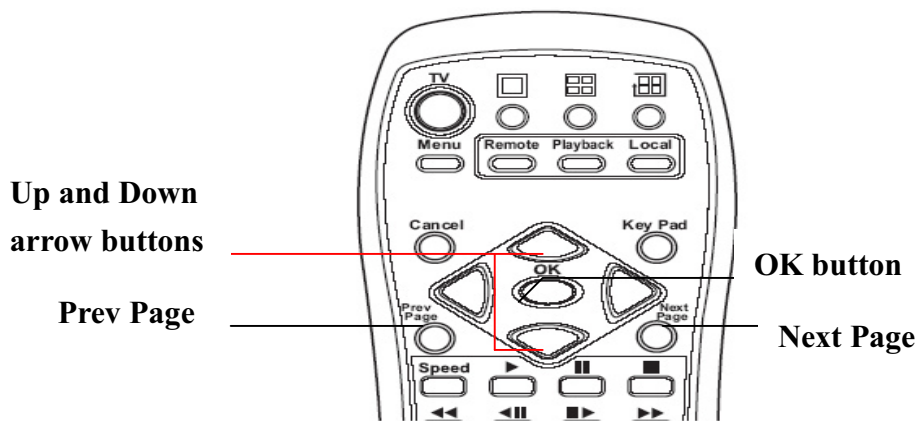
4.3 System setup

The **System Setup** menu enables you to change many different parameters of the AP-5004. This section describes each option in the **System Setup** menu.

```

System Setup (1 / 2)
-----
Password Protect
Video
Video Input
Disks
TV Output
OSD Text
TCP / IP
Account
Audio
Serial Ports
System Info
Date / Time
Alarm
ISP
Registry
Running Mode
Algorithm
NTP Setup
Next
  
```

Use the **Up** and **Down** arrow buttons to highlight an option, and use the **OK** button to confirm your choice. You can move between pages using the **Prev Page** and **Next Page** buttons on the remote control.



4.3.1 Password protect

Use the **Password Protect** option to enable password protection, set administrator and user passwords, set the auto lock period and lock the system immediately. Enabling password protection prevents unwanted users from accessing or configuring the AP-5004. The **Password Protect** menu has the following choices:

Enable - enables password protection.

Admin Pass - sets the admin password.

User Pass - sets the user password.

Auto lock After - enables password protection after the specified time interval.

Lock Now! - enables password protection immediately.

To set the user or admin password:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Admin Pass** option to set the administrator password or the **User Pass** option to set the user password.

```

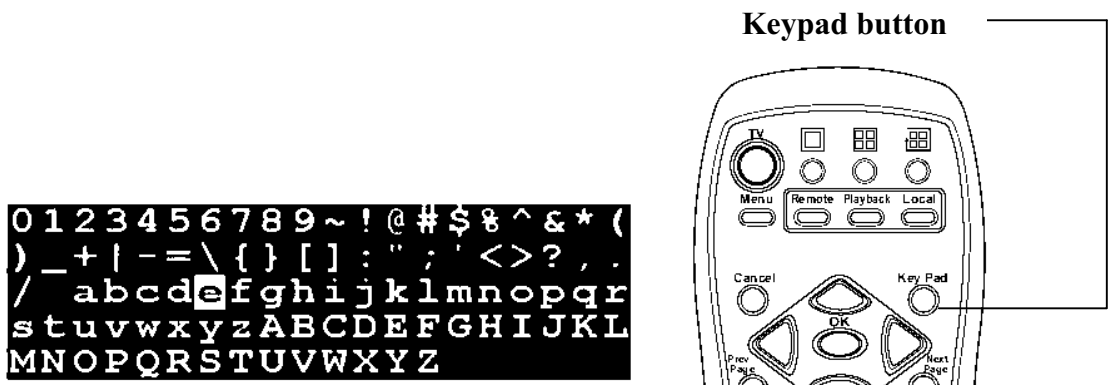
Password Protect
Enable-No
Admin Pass-
User Pass-
Autolock After-0 sec
Lock Now!
    
```

2. Press the **Right** arrow button to display the password entry screen.

```

Admin Pass:password
    
```

3. Press the **keypad** button on the remote control to display the on-screen keyboard.



4. Use the **Arrow** buttons on the remote control to choose a letter and use the **OK** button to confirm your choice.
5. When the new password has been entered correctly, press the **keypad** button on the remote control to turn off the on-screen keyboard.
6. Press the **OK** button to confirm the new password.

When user or admin passwords are set and enabled, you will be prompted for a password before going on further functions. Use the on-screen keyboard to set user or admin passwords as described.

To set the password protects function:

1. Select the **Enable** option from the **Password Protect** menu.
2. Use the **Left** and **Right** arrow buttons to toggle between **Yes** and **No**.
3. Press the **OK** button to confirm your choice.

The autolock function in the Password Protect menu will lock the system after the specified period of inactivity.

To set the period of inactivity before the system is locked:

1. Highlight the autolock option in the **Password Protect** menu.
2. Use the **Left** and **Right** arrow buttons to increase or decrease the period of inactivity.
3. Press the **OK** button to confirm your choice.

To lock the system immediately:

1. Highlight the **Lock Now!** Function in the **Password Protect** menu.
2. Use the **Left** or **Right** arrow buttons to confirm the operation.

4.3.2 Video

Use the **Video** menu to set all the video parameters for the cameras connected to the AP-5004. There is one video screen for each camera with the following parameters:

Standard - sets the video signal format. Choose NTSC in the US, or PAL in Europe and most Asian countries.

Brightness- adjusts the amount of light or brightness for the selected camera according to your preference.

Contrast - adjusts the difference between light and dark areas or contrast for the selected camera according to your preference.

Saturation - adjusts the amount of color for the selected camera.

Hue - adjusts the dominant color for the selected camera.

Quality (All) - adjusts the video quality for all cameras. The default setting is 80. We recommend that you do not set this value to 100 to avoid slow video transmission and using up hard disk space easily.

Compression Boost- enable you to compress the video signal to save disk space and thus extend recording time. It is recommended to keep this setting to None. The higher the compression boost, the lower the video data rate. We recommend you use the H.263 or MPEG4 algorithm for low data

rate applications..

Auto Gain Control-enables automatic gain control to adjust the video signal strength.

Mirror Horizontal – flips the video signal from the selected camera along the horizontal axis.

Mirror Vertical – flips the video signal from the selected camera along the vertical axis.

Max Connection - limits the maximum number of connections allowed to access the AP-5004 over the Internet. Set to zero to allow the maximum number of connections.

Max Bandwidth - sets the maximum bandwidth in bytes/second that can be used by users connecting to the AP-5004 over the Internet.

Max Conn. Bandwidth - sets the maximum bandwidth allocated for each connection to the AP-5004 . This is the maximum bandwidth divided by the maximum connections.

Dimension- sets 320x240 or 640x480 resolution for each camera.

Water Mark-Sets water mark on the video image.

Local Display- enables viewing the selected camera video signal on the local display. If this option is set to Off, the camera is still optional and its video can be recorded if needed.

PTZ Device- Chose one PTZ from our support list. If user can't find out PTZ camera, please contact us.

```

Video (1/12)
Standard-AUTO
Brightness-40
Contrast-50
Saturation-75
Hue-50
Quality (All) -80
Compression Boost-None
Auto Gain Control-No
Mirror Horizontal-No
Mirror Vertical-No
Max Connection-0
Max Bandwidth-0
Max Conn. Bandwidth-0
Dimension-320x240
Water Mark-OFF
Local Display-ON
PTZ Control
Next

```

To change the video parameters:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the option.
2. Use the **Left** and **Right** arrow buttons to change the value assigned to the setting.
3. Press the **OK** button to confirm the new settings.

Each camera has its own video screen. To move between the screens for each camera, use the **Prev Page** and **Next Page** buttons on the remote control.

PTZ Control

Select the type of PTZ cameras used and set each camera that has one connected to Yes. The timeout value represents the time given to the cameras to respond to a command. Don't forget to setup PTZ ID.

```

PTZ
PTZ Device-VP-202
PTZ ID-1
Baud Rate-9600
Timeout (Sec)-120
PTZ Control

```

To set the timeout value for PTZ cameras connected to the AP-5004:

1. Use the **Up** and **Down** arrow buttons to highlight the **Timeout** field.
2. Use the **Right** arrow key to increase the value and the **Left** arrow key to decrease the value.
3. Press the **OK** button to confirm the new value.

You can set and recall up to 6 preset configurations for each camera using the following buttons in the PTZ control section:

Preset - save the current pan, tilt, zoom, and focus settings in one of 6 preset configurations.

Recall - recall the selected preset configuration.

Zoom - adjust the zoom to provide a more closer or wider view of the subject.

Focus - adjust the focus of the camera.

Speed - Adjust the speed of the selected PTZ camera.

Pan and tilt - Adjust the pan and tilt of the selected camera.

4.3.3 Video input

This function is to map physical camera video inputs on AP-5004 cards to the video positions on local display. Normally, video input#1 is map to position #1. But you actually can set video inputs to any position from #1 - #16, (depends on how many AP-5004 cards you install) on the screen as long as there is vacancy.

```
Video Input
Camera 1 - 1
Camera 2 - 2
Camera 3 - 3
Camera 4 - 4
```

4.3.4 Disks

Use the **Disks** menu to add and remove network disks from the system. Network disks can be used to provide more storage space for long time recording .

```
Setup Disks
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
-- Save & Reboot --
```

To add a network disk:

1. Highlight the disk you want to add and press the **OK** button.
2. When the **Add Disk** screen is displayed, press the **OK** button.

Add Disk**Network Disk (NFS)**

The Add Network Disk menu is displayed, enabling you to set the IP address and volume size of the disk, test its validity, and save the disk parameters.

Add Network Disk

IP/Addr -

Volume -

Test!

Save!

To enter an IP address:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **IP/Addr** option and press the **Right** arrow button to confirm the choice.
2. Enter an IP address using the number buttons on the remote control.

Note: You cannot enter a period (dot) between the fields in the IP address using the remote control keypad. Use the on-screen keypad to enter the dots.

3. Press the **OK** button to confirm the new address.

To enter a volume name for the new disk:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Volume** option and press the **Right** arrow button to confirm the choice.
2. Use the on-screen keyboard to enter a volume label for the new disk.

To test a network disk:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Test!** option.
2. Press the **OK** button to confirm the choice.

The test result will appear on the screen.

To save disk parameters:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Save!** option.
2. Press the **OK** button to confirm the choice.

4.3.5 TV output

The AP-5004 can be connected to a VGA monitor or a TV to view the camera video signal. Use the **TV Output** menu to set the following parameters for the video output port:

Device - sets the output to VGA or TV.

Standard - sets the signal format for the output device. Select from NTSC, PAL, SECAM, and so on.

Output to - sets the video output to the composite or S-Video signal.

Delay - sets the delay between consecutive camera signals when displaying all the camera signals automatically.

Camera (From) - specifies the first camera signal displayed in the automatic cyclic camera mode.

Camera (To) - specifies the last camera signal displayed in the automatic cyclic camera mode.

Screen Split - sets the number (1, 4, 9, or 16) of cameras to be shown on the local screen.

Time Stamp - Enables and specifies the position of the time stamp on the screen.

Time Format - Specifies the format of the time stamp.

Deinterlace - Software → based De-interlace support.

```

TV Output
Device-VGA
Standard-NTSC
Output to-Composite
Delay(Sec)-10
Camera(From)-1
Camera(To)-12
Screen Split-Single
Time Stamp-Disable
Time Format-MM/DD/YYYY
Deinterlace-ON

```

Use the **Up** and **Down** arrow buttons on the remote control to select any one of the displayed parameters and use the **Left** and **Right** buttons to cycle through the available options. Press the **OK** button when parameters are set correctly.

4.3.6 OSD text

A line of text can be displayed with the video from each camera connected to the AP-5004. Use the **OSD Text** menu to enable the text and alter it. You can also set the position of the text using the X and Y parameter values. Increasing the value of Y moves the text down the screen. Increasing the value of X moves the text to the right.

```

OSD Text (1/16)
Enable-NO
X-0
Y-0
Text-Alexander Writes
Next

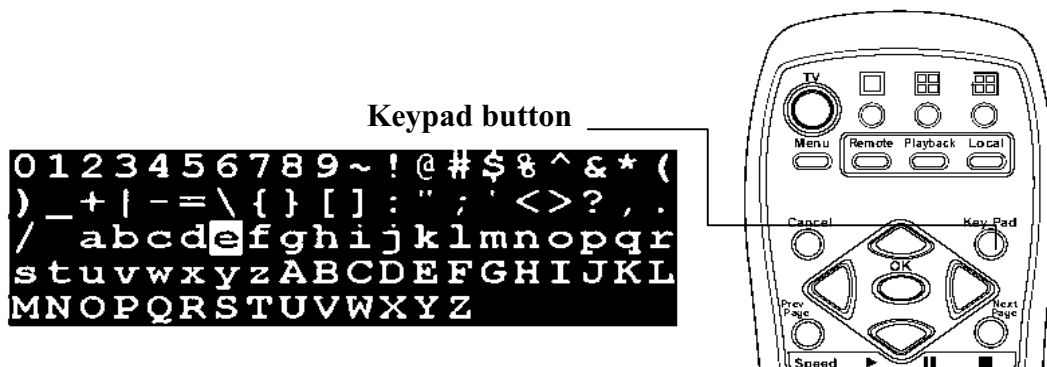
```

To alter the text position:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight X or Y.
2. Use the **Right** button to increase the value and the **Left** button to decrease the value.
3. Press the **OK** button when the value is correct.

Use the on-screen keyboard to alter the OSD text as follows:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Text** option.
2. Use the **Right** arrow button to confirm.
3. Press the **keypad** button on the remote control to display the on-screen keyboard.



4. Use the **Arrow** buttons to highlight the letters you need for your text and press the **OK** button to choose them.

- When your text is complete, press the **Keypad** button to remove the on-screen keyboard.
- Press the **OK** button to save the new text.

4.3.7 TCP/IP

Use the **TCP/IP** menu to set the IP address of the AP-5004, the gateway, the subnet mask, the DNS server IP address, and the HTTP port. If you want to use the AP-5004 on your network, see your network administrator to obtain a valid IP address for the AP-5004.

Note: when you setup server name and workgroup, please key-in English characters or numbers only.

To change the TCP/IP parameters:

- Select the field to change using the **Up** and **Down** arrow buttons.

```

TCP / IP
IP - 10 . 11 . 100 . 81
Gateway IP - 10 . 11 . 100 . 1
Subnet Mask - 255 . 255 . 0 . 0
DNS IP - 168 . 95 . 1 . 3
HTTP Port - 80
Network Neighbor - OFF

```

- Press the **Right** arrow button to confirm.
- Use the number pad on the remote control to enter a new value
- Press the **OK** button to confirm the new value.

Network Neighbor function:

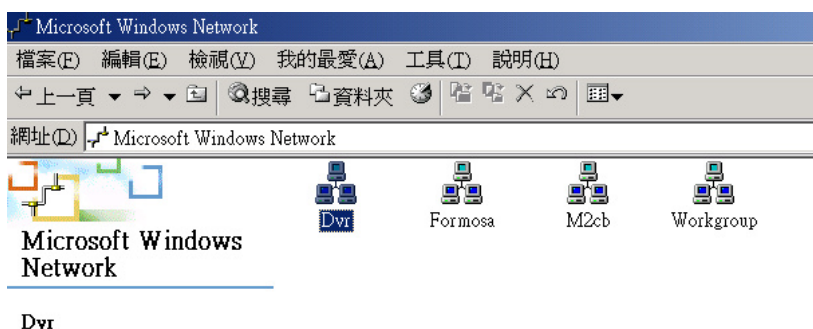
User can see AP-5004 recording directory from other PC through Microsoft Windows network neighbor. Then user can copy files in that directory to PC or do remote back up automatically, if user has the proper software installed on the PC.

After define the server name, workgroup and WINS server, user can find out the AP-5004 recording files from Microsoft windows network neighbor. See as following picture.

```

Network Neighbor
Enable - OFF
Server Name - DVR
Workgroup - DVR
WINS Server - 0 . 0 . 0 . 0
Save

```



4.3.8 Account

Use the **Account** menu to set up an administrator name and password as well as user name and passwords. The default administrator name is **Webmonitor** and the default password is **OYO**. You can also use this menu to set up to 16 additional users, their passwords and their permissions on the system.

Note: It is important that you set up a user name and password. The user is different from the administrator and has access to only the video. Use the **More Users** function to alter the authorities of users who access the AP-5004 from the Internet.

To set an Admin/User name or password:

1. Use the **Up** and **Down** arrow buttons to select the field to change.

```
Account
Admin Name
Admin Password
User Name
User Password
More Users...
```

2. Press the **Right** arrow button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select the letters you require and the **OK** button to confirm.
5. When the field is correct, press the **Key Pad** button to turn off the on-screen keyboard.
6. Press the **OK** button to confirm.

To set up additional users and their permission rights:

1. Use the **Up** and **Down** arrow buttons to select the **More Users** choice.

```
Name - 2 3
Pass -
Camera 1 - Yes
Camera 2 - Yes
Camera 3 - Yes
Camera 4 - Yes
Camera 5 - Yes
Camera 6 - Yes
Camera 7 - No
Camera 8 - No
Camera 9 - No
Camera 10 - No
Camera 11 - No
Camera 12 - No
Camera 13 - No
Camera 14 - No
Camera 15 - No
Camera 16 - No
PTZ - No
Playback - No
Audio - No
```

2. Press the **Right** arrow button to confirm.
3. Use the **Arrow** buttons to select the **Name** and **Pass** options and modify these fields in the same manner as in the previous procedure.
4. Use the **Up** and **Down** buttons to select any cameras from **Camera1** through **Camera16**.
5. Press the **Right** arrow to select **Yes** to allow the user to access and control the selected camera.
6. Use the **Up** and **Down** buttons to select the **PTZ** option.
7. Press the **Right** arrow button to select **Yes** to enable PTZ control of the selected cameras for the user.
8. Use the **Up** and **Down** buttons to select the **Playback** option.

9. Press the **Right** arrow button to select **Yes** to enable the user to record and play back the signal from the selected cameras.
 10. Use the **Up** and **Down** buttons to select the **Audio** option.
- Note:** Audio can be disabled for live viewing and playback of recordings using the Audio Disable function.
11. Press the **Right** arrow button to select **Yes** to enable the user to hear the live audio from the selected cameras.

4.3.9 Audio

Use the **Audio** menu to set up the audio parameters for the AP-5004. The configurable parameters areas follow:

- **Mic Gain** – adjusts the gain of the microphone.
- **Speaker** – adjusts the speaker output level (volume).
- **Mic Timeout** – sets the timeout for the microphone.
- **Speaker Timeout** – sets the timeout for the speakers.
- **Self Test (Mic -> Spk)** – performs a self-test to ensure correct operation of the microphone and speaker.
- **Camera** - setup which camera mapping to which audio channels. Audio1 is the audio input from motherboard. The other audio inputs are from video capture card.

Note: Make sure that audio is enabled when recording signals from the cameras attached to the AP-5004.

To set the audio parameters:

1. Use the **Up** and **Down** arrow buttons to select a field to change.

```

Audio
Mic Gain - 100
Speaker - 100
Mic Timeout - 60
Speaker Timeout - 60
Self Test (Mic -> Spk) - OFF
Camera 1 - Audio 1
Camera 2 - Null
Camera 3 - Null
Camera 4 - Null
Camera 5 - Null
Camera 6 - Null
Camera 7 - Null
Camera 8 - Null
Camera 9 - Null
Camera 10 - Null
Camera 11 - Null
Camera 12 - Null

```

2. Use the **Right** arrow button to increase the value and the **Left** arrow button to decrease the value.
3. Press the **OK** button to confirm.
4. Use the **Up** and **Down** arrow buttons to select the **Self Test (Mic -> Spk)** option.
5. Press the **Right** arrow button to set the option to on to make sure that the microphone and speaker is working correctly.

4.3.10 Serial ports

The AP-5004 can be connected to other serial devices such as external modems, GPIO (General Purpose Inputs and Outputs), Voice Call devices, PTZ cameras, camera control devices, text input devices, or USB serial ports, using two serial ports - **COM1** and **COM2**. The RS232 standard is used for these ports. Use the **Serial Ports** menu to set the following parameters:


```

Serial Port (1/2)
COM1 Device-Modem
COM1 Speed-9600
COM1 Flow Control-Yes
COM1 Data Bits-8
COM1 Parity-None
COM1 Stop Bits-1
Next

```

COM1 Device - selects the type the serial device. You can select external modems, GPIO, voice call modems, etc.

COM1 Speed - sets the speed (1200 to 115200 bps) for the serial device.

COM1 Flow Control - enables or disables the flow control for the device.

COM1 Data Bits - Sets the number of data bits (6, 7, or 8) for the device.

COM1 Parity - Sets odd or even parity.

COM1 Stop Bits - Sets 1 or 2 stop bits for the device.

To change the serial port parameters:

1. Use the **Up** and **Down** buttons to select the field to change.
2. Use the **Left** and **Right** arrow buttons to cycle through the available options for that field.
3. Press the **OK** button when the field is set correctly.

Note:

1. You can use the **Prev Page** and **Next Page** buttons on the remote control to toggle between the **COM1** menu and **COM2** menu.
2. When an optional GPIO module is connected to the serial port, the AP-5004 detects it automatically and provides GPIO options in the system menu.

4.3.11 System information

Use the **System Information** option to display the System Information screen and view information about the boot disk, Flash Size, TCP/IP parameters, the MAC ID of the device, firmware version and date of installation, model number, and hard disk properties.

```

System Information
Boot-DOM/CF/Disk
Flash Size-128 MB
IP-10.11.100.51
Mask-255.255.0.0
MacID-00:0A:48:1F:A6:CF
Start-2006/12/26 14:12:04
FW Ver-1.4.3
FW Date-Dec 25 2006 18:35
Model-100/400
Driver Ver-1.1.2
Kernel Ver-2.4.31
Card Model-VP40 x 2
Disk Size-80GB
Disk Used-17GB (21.2%)

```

4.3.12 Date/Time

Use the **Date/Time** option to set the year, month, day, hour, minute, second, and time zone in which the AP-5004 is installed.

To set the time or time zone:

1. Use the **Up** and **Down** arrow buttons to select the field to change.

```

Date/Time
Year-2004
Month-7
Day-19
Hour-14
Minute-31
Second-16
T.Zone-+7:00 Bangkok,Hanoi,J

```

2. Use the **Left** arrow to decrease the value and the **Right** arrow to increase the value for that field.
3. Press the **OK** button when the values are set correctly.

Note: The AP-5004 reboots to save the changes, if you modify the time zone.

4.3.13 Alarm

Use the **Alarm** menu to define what constitutes an alarm condition and how the AP-5004 reacts when such a condition occurs. You can configure an alarm condition to be generated when motion is detected by the camera, if the video signal is lost from a camera, if the disk space is too low, if there is a disk error or if pos event. Once the alarm is generated, you can set the alarm notification through a beep, a message, a video popup or E-mail.

The Alarm menu has the following submenus:

E-Mail - enables you to set up an E-mail address and verify it is working correctly.

Video Popup (sec) - sets the time for which a camera is displayed on your monitor when an alarm is generated.

Voice Call – this function is not supported.

Set Action - sets the action that will generate an alarm condition for each camera.

```

Alarm Setup
Motion Detection
E-Mail
Video Popup(sec) - 5
Voice Call
Set Action

```

Note: The **Voice Call** function is not supported.

To enter E-mail details:

1. Select the **E-Mail** option from the **Alarm** menu.
2. Press the **Right** button to confirm. The E-Mail submenu is displayed.

```

E-Mail
Addr -
Name -
Pass -
Sender -
Test

```

3. In the **E-Mail** menu, use the **Up** and **Down** buttons to select a field from the following:

Addr - Type the name of your mail server. See your network administrator for details about the address of your mail server.

Name - Type your user name.

Pass - Type your password.

Sender - Type the e-mail address of the sender.

Test - Checks the validity of the provided E-mail address by sending E-mail.

5. Press the **Right** arrow button to confirm your selection.
6. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
7. Use the **Arrow** keys to select the letters you need to complete the field and press the **OK** button to confirm.
8. When the field is complete, press the **Key Pad** button to turn off the on-screen keyboard.
9. Press the **OK** button to save your changes.

Video Popup

Use the **Video Popup** menu to set up the time period for which the video from the selected camera is displayed on your screen. The default screen is 20 seconds.

To set the video popup time:

1. Use the **Up** and **Down** arrow buttons to select the **Video Popup** option from the Alarm menu.
2. Use the **Left** arrow button to decrease the popup time and the **Right** arrow button to increase the time
3. Press the **OK** button to save your settings.

Set Action

Use the **Set Action** option to define what action is taken by the AP-5004 when an event occurs. The following options are available:

Video Lost - generates an alarm when the video from the selected camera is not available.

Disk Space Low - generates an alarm when the disk space is insufficient.

Disk Error - generates an alarm if there is an error while accessing the disk.

POS Event - generates an alarm if there is an error while integrate pos data with video.

```
Event List
GPI
Motion Detection
Video Lost
Disk Space Low
Disk Error
POS
```

To configure events using the Set Action option:

1. Use the **Up** and **Down** arrow buttons to select an event from the list.
2. Press the **Right** arrow button to display the submenu for the event with the following options:

Message - displays a message on screen when the event occurs.

Beep - sounds a beep when the event occurs.

E-Mail - sends an E-mail to the specified address when the event occurs.

Voice Call - this function is not supported.

Video Popup - displays the video from the selected camera on your screen.

3. Use the **Up** and **Down** buttons to select the desired action from the following options:

4. Press the **Right** arrow button for the required action to view the submenu.
5. After enabling the action, set up the **Start** and **End Hour, Minute, and Second** to make the feature active during the specified time interval of the day. The default settings have the feature enabled throughout the whole day.
6. If you selected the **E-Mail** option as the desired action, you have to set up the recipient of the E-mail, the subject and the text matter of the E-mail. You can specify which of the 16 cameras status is in the E-mail.

4.3.14 ISP

If you are connecting to the Internet using dial-up, enter your ISP details using the **ISP** option from the System Setup menu. Set up the following options:

Phone No. - enter the telephone number that is dialed by the dial-up modem.

Name - enter the user name of your dial-up account.

Pass - enter the password for your dial-up account.

TCP/IP - set up automatic or manual TCP/IP. If the AP-5004 is connecting through a DHCP server, an IP address is assigned to it automatically. If you want to set the IP address of the device manually, select the **Manual** option.

To enter ISP details:

1. Use the **Up** and **Down** arrow buttons to select a field to change.

ISP

Phone No. -

Name -

Pass -

TCP/IP - Automatic

2. Press the **Right** arrow button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select letters and numbers from the on-screen keyboard and use the **OK** button to confirm.
5. When the field is correct, press the **Key Pad** button to turn off the on-screen keyboard
6. Press the **OK** button to confirm the new field.

4.3.15 Registry server

The **Registry Server** menu enables you to set up the registry server for your device. If you are using a dynamic IP address for the AP-5004, you can set up the device to post its IP address to the APEC registry server. You can then look up your IP from the MAC address or server name.

To enter Registry Server details:

1. Use the **Up** and **Down** arrow buttons to select a field to change.

```
Registry Server
Path-cgi
HTTP Port-80
Addr-registry.nfic.com.tw
Test...
```

2. Press the **Right** arrow button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select letters and numbers from the on-screen keyboard and use the **OK** button to confirm.
5. When the field is correct, press the **Key Pad** button to turn off the on-screen keyboard.
6. Press the **OK** button to confirm the new field.

4.3.16 Running mode

Use the **Running Mode** menu to switch between Network Mode and ISP Mode, and between Mouse Mode and IR Remote Control Mode.

```
Running Mode
Mode-Network Mode
Control-IR Control
```

4.3.17 Algorithm

You can change the compression algorithm used by the AP-5004 to record video. The AP-5004 supports MPEG, JPEG, MJPEG, and H.263 ,MPEG4 algorithms for compression. For the JPEG and MJPEG algorithms, the video quality is better but the data rate is also high. The H.263 and MPEG4 algorithm provides a good video quality with low data rate .

To set up the algorithm:

1. Use the **Up** and **Down** arrow buttons to select a field to change from the **Algorithm** menu.

```
Algorithm
Algorithm-MPEG4
```

2. Use the **Right** and **Left** arrow buttons to toggle the available options.
3. Press the **OK** button when the fields are set correctly.

4.3.18 NTP setup

Use the **NTP** (Network Time Protocol) **Setup** function to synchronize the real-time clock on the AP-5004 with the atomic clock. Before using this feature, make sure that the correct date, time and time zone have been set up. Also make sure that the DNS IP number has been set up under the TCP/IP settings.

The following options are available in the submenu:

Enable - enables the NTP function to synchronize the real-time clock.

Period (Hour) - sets up the time interval after which the time is re-synchronized.

Server - selects the NTP server from several pre-defined choices.

Edit NTP Server - enables you to choose your own NTP server.

Test&Save? - tests the server and saves the changes.

To change NTP settings:

1. Use the **Up** and **Down** arrow buttons to select a field to change from the NTP menu.

```
NTP Setup
Enable - ON
Period (Hour) - 1
Server - ntp1.cs.wisc.edu
Edit NTP Server
Test&Save? (OK/Cancel)
```

2. Press the **Right** button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select letters from the on-screen keyboard and use the OK button to confirm.
5. When the field is set correctly, press the **Key Pad** button on the remote control to turn off the on-screen keyboard.
6. Press the **OK** button to save changes.

4.3.19 License Setup

There are two ways to grant POS license. One is key-in license key; the other one is plug-in a key-pro. So if you plug-in a key-pro you don't need to key in the license number again in the license setup menu. Use the **License** menu to key in the license number.

There are three POS License to three levels:

Level 1: Single POS unit – Can connect ONLY one cash register.

Single POS only one cash register. This level pos function doesn't need to register.

Level 2. 4 POS units -- Can connect maximum 4 cash registers.

Level 3. Full functions – Can connect maximum 16 cash registers.

```
License Setup
Serial No - KKBBBBBK
License Key -
Register Now...
Licensed Func.
POS
```

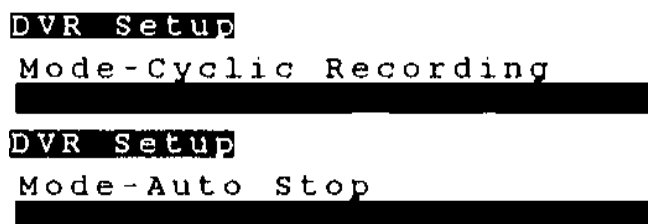
4.4 Record setup

Use the **Record Setup** menu to set all the record options for the AP-5004. There are four **Record Setup** submenus - **AP-5004**, **Record Schedule**, **Motion Detection**, **GPI Trigger**, **Text Record** and **Pre-Alarm**. This section covers each submenu in turn.



4.4.1 AP-5004 Setup

Use the **AP-5004** menu to set the AP-5004 (Digital Video Recorder) mode. Choose **Cyclic Recording** to keep recording on the hard disk continuously. Choose **Auto Stop** to stop recording when the disk is full.



You can set an alarm to be generated when the hard disk is full and send notification through a beep, E-mail, or text message.

To change the AP-5004 mode:

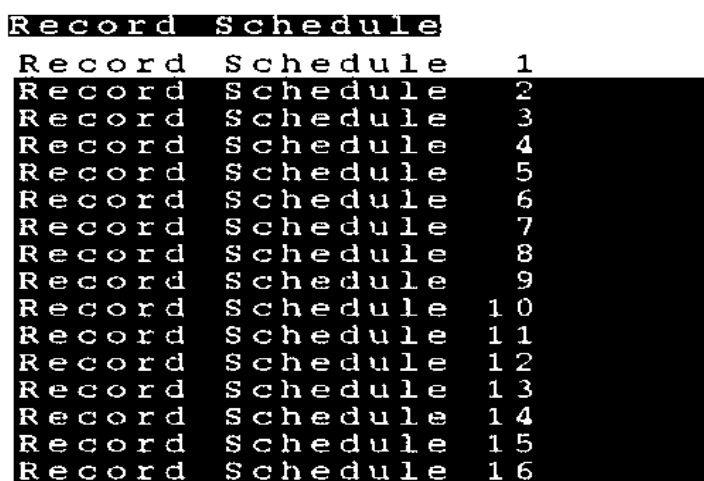
1. Select the **Mode** option from the **AP-5004** submenu using the **Up** and **Down** arrow buttons on the remote control.
2. Use the Left and Right buttons to select either **Cyclic Recording**, or **Auto Stop**.
3. Press the **OK** button to save changes.

4.4.2 Record schedule

You can set up to 16 record schedules that automatically record at given times and days.

To configure a record schedule:

1. From the **Record Schedule** menu, pick a schedule to change from the displayed list, using the **Up** and **Down** arrow buttons.



2. Press the **Right** button to display the parameters for that schedule.

```

Edit Schedule # 1 (1/4)
Enable - No
Mon - OFF
Tue - OFF
Wed - OFF
Thu - OFF
Fri - OFF
Sat - OFF
Sun - OFF
Start Hour - 00
Start Minute - 00
Start Second - 00
Stop Hour - 00
Stop Minute - 00
Stop Second - 00
Camera 1 - Normal Record
Camera 2 - Normal Record
Next

```

3. Use the **Up** and **Down** arrow buttons to select a field to change, from the following options:

Enable - enables the recording schedule.

Mon through Sun - enables recording on the specified days of week.

Start Hour/Minute/Second - sets the exact time when the recording starts.

Stop Hour/Minute/Second - sets the exact time when the recording ends.

Camera 1 through 16 - sets the recording mode for the selected camera. Select Normal Record to record continuously. Select Motion Detect to record only when motion is detected. Select Text Record to record only when pos event is detected. Select OFF to disable recording.

Audio - enables recording of sound along with the video signal.

Frame Rate Setup - sets the frame rate for recording. Set Auto Speed to Yes and the device evenly divides the recording frame rate amongst all cameras. If set to No, you can manually set up the individual frame rates for each camera.

Weight recording- weight recording is setting special recording frame rate when an alarm of one of camera was triggered.

4. Use the **Right** and **Left** arrow buttons to change the value of that parameter.
5. Use the **Prev Page** and **Next Page** buttons to move to the previous or next page.
6. Press the **OK** button when all parameters are set.

4.4.3 Motion Detection

To set motion detection conditions:

1. Use the **Up** and **Down** arrow buttons to select the **Motion Detection** option from the **Alarm** menu and press the **OK** button.
2. When the motion detection menu appears, uses the **Up** and **Down** Arrow buttons to select one of the following options:
 - **Enable** – configures the motion detection feature for each camera.
 - **Sensitivity** – sets the sensitivity value for detecting motion.
 - **Set Detect Area** – sets the area in the camera's field of vision over which motion is detected. This option is displayed only after you set the **Enable** option to **Yes**.
 - **Enable all area** – sets the all area is motion detect area.

- **Disable all area** –set no area is motion detect area.
3. Select the **Enable** field and use the **Left** and **Right** arrow buttons to toggle between **Yes**, to enable the motion detection feature, and **No**, to disable it.
 4. Select the **Sensitivity** choice and use the **Left/Right** arrow buttons to decrease/increase the sensitivity. We recommend that you keep the sensitivity level to its default setting. If the sensitivity level is adequate, an orange square is displayed in the upper left-hand corner of the screen when motion is detected.
 5. Select the **Set Detect Area** option and press the **Right** arrow button to configure the area as follows:
 - i. The highlighted area in red is the area monitored by motion detection. Use the **Arrow** buttons to move the cursor.
 - ii. Press the **OK** button to cut off any areas where you want to disable motion detection. If you want motion detection enabled in the entire field of vision of the camera, leave the screen completely red.
 - iii. Press the **Cancel** button to return to the previous menu when done.
 6. Select the **Save** option and press the **OK** button to save all your changes.
 7. Use the **Prev Page** and **Next Page** buttons to move to the motion detection menus for all connected cameras.
 8. Press the **OK** button when settings are correct. You need to provide E-mail details if you want an E-mail to be sent when an alarm occurs.

```

Motion Detection (1/12)
Enable-Yes
Sensitivity-5
Set Detect Area
Enable All Area
Disable All Area
Save
Next

```

4.4.4 GPI Trigger

Use the **GPI Trigger** function to enable recording video from specified cameras when triggered by an external alarm (GPI) connected to the system.

```

GPI Trigger # 1 (1/16)
Enable-Yes
Record Time (sec) - 0
Camera1 - No
Camera2 - No
Camera3 - No
Camera4 - No
Camera5 - No
Camera6 - No
Camera7 - No
Camera8 - No
Camera9 - No
Camera10 - No
Camera11 - No
Camera12 - No
Next

```

4.4.5 Text Record

1. Use the **Up** and **Down** arrow buttons to select the **Text Record** option from the **Alarm** menu and press the **OK** button.

- When the text record menu appears, Use the number buttons on the remote control to enter a new value. The minimum record time is 30sec.
- Press the **Right** arrow button to confirm.
- Uses the **Up** and **Down** Arrow buttons to select **POS Event** or **Text** to record only when POS event or text was detected.
- Press the **OK** button when the value is set correctly.

Text Record			
Record	Time	(sec)	- 10
Camera 1	-	POS Event	
Camera 2	-	Text	
Camera 3	-	POS Event	
Camera 4	-	POS Event	
Camera 5	-	POS Event	
Camera 6	-	POS Event	
Camera 7	-	POS Event	
Camera 8	-	POS Event	
Camera 9	-	POS Event	
Camera 10	-	POS Event	
Camera 11	-	POS Event	
Camera 12	-	POS Event	
Camera 13	-	POS Event	
Camera 14	-	POS Event	
Camera 15	-	POS Event	
Camera 16	-	POS Event	

4.4.6 Pre- Alarm

Use the **Pre-Alarm** function to determine how many frames are recorded before an alarm event occurs. Each camera can be set separately and you can record up to 300 frames.

To set the Pre-Alarm frame capture:

- Use the **Up** and **Down** arrow buttons to select **Pre-Alarm** option from the **Record Setup** menu.

Pre - Alarm			
Camera 1	-	300	Frames
Camera 2	-	0	Frames
Camera 3	-	0	Frames
Camera 4	-	0	Frames
Camera 5	-	0	Frames
Camera 6	-	0	Frames
Camera 7	-	0	Frames
Camera 8	-	0	Frames
Camera 9	-	0	Frames
Camera 10	-	0	Frames
Camera 11	-	0	Frames
Camera 12	-	0	Frames

- Press the **OK** button to display the Pre-Alarm menu.
- Use the **Up** and **Down** arrow buttons to select the camera to change from the list.
- Press the **Right** arrow button to confirm.
- Use the number buttons on the remote control to enter a new value.
- Press the **OK** button when the value is set correctly.

4.5 Playback

Use the **Playback** function to display a list of all recordings stored on the AP-5004. Use the **Up** and **Down** arrow buttons to select a recording to play back and press the **OK** button to confirm. The chosen

track is played. Use the **Prev Page** and **Next Page** buttons on the remote control to move between pages.

4.5.1 Playback list

Use the **Playback list** function to display a list of all recordings stored on the AP-5004 as follows.

Playback list (13/22)				
2004-07-15	16:00			0M
2004-07-15	15:00			0M
2004-07-15	14:00			0M
2004-07-15	13:00			0M
2004-07-15	12:00			0M
2004-07-15	11:00			0M
2004-07-15	11:00			0M
2004-07-15	10:00	M		80M
2004-07-14	19:00	M		578M
2004-07-14	18:00	M		754M
Prev		Next		

1. Use the **Up** and **Down** arrow buttons to select a recording to play back. The alarm condition which caused the file to be recorded is indicated in the list. For instance, in the screen shot shown here, the letter **M** next to a file indicates that the file was recorded after motion was detected by the camera. “**A**” indicates that the file was recorded after a GPIO event. An asterisk (*) before the date indicates that the file is locked.
2. Press the **OK** button to confirm. The chosen recording is played back.
3. Press the **Display** button on the remote control to display various properties of the recorded file. The date and time of recording are displayed in the upper right corner.

Progress - A one hour time line is displayed at the bottom of the screen with the moving orange line indicating the status of playback.

Recorded Data - The aqua colored portion is where there is recorded data in that hour . A full blue line means that the whole hour interval was recorded.



GPI - The screen shows where alarm triggers were generated. The red bar shows the trigger. To move to

the next motion detection or alarm trigger event, press the **Right/Left** arrow buttons.



Motion Detection – The yellow bars represent where motion detection was set off.



Searching for a file:

The AP-5004 playback list can be searched for a specific file. You can conduct the search based on time, event, or text.

4.5.2 To search for a recorded file:

1. While viewing the play list, press the **Menu** button to display the menu.



2. Select one of the following options using the **Up** or **Down** arrow buttons:

Search by Time - searches the list of recorded files for the specified recording time.

Search by Event - searches the list of recorded files for the specified event such as a GPIO trigger that occurred within the specified time interval.

Search by Text - searches the list of files recorded with POS information for specified text that was recorded within the specified time interval.

3. Press the **Right** arrow button to view the submenu for the selected option.

```
Search by Time
Year-2004
Month-8
Day-17
Hour-17
Minute-11
Second-9
```

4. Select each of the options such as **Year, Month, Day**, and so on using the **Up** or **Down** arrows.
5. Modify the settings as required using the **Left** and **Right** arrow buttons.

Note: If you select the **Search by Event** option, choose an event from **GPI 1~16**. If you choose the **Select by Text** option, enter the text using the **Key Pad** button.

6. Press **OK** when done to conduct the search.

4.5.3 Locking files

To prevent accidental deletion of recorded files, you can lock a file. This also prevents over-writing of the file when the recording mode is set to **Cyclic**.

To lock a file:

1. While viewing the play list, use the Up/Down arrow buttons to select the desired file.
2. Press the **Menu** button to display the menu.

```
Playback Menu
Search by Time
Search by Event
Search by Text
Lock File!
Backup
```

3. Select the **Lock File!** option using the **Up** or **Down** arrow buttons:
4. Press the **OK** button to confirm.

The file is locked and cannot be deleted or over-written. There is an asterisk (*) ahead of the file name. To unlock a file, follow the same procedure and select the **Unlock File!** option from the menu.

4.5.4 Backing up the data

If the AP-5004 is equipped with CD/RW, DVD+RW drive, you can back up your recorded files to a CD, DVD, or USB hard drive.

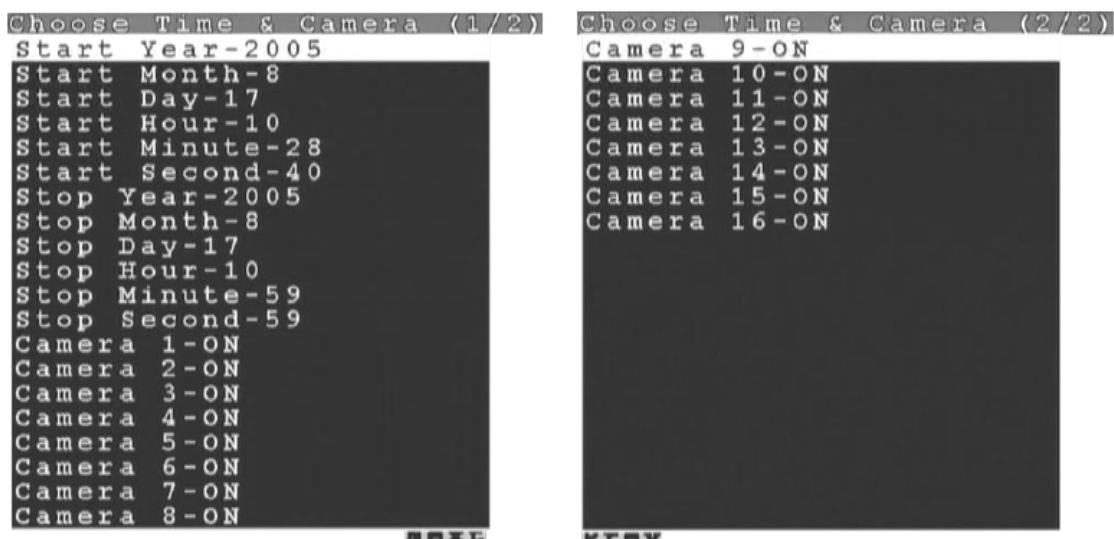
To back up your data:

1. While viewing the play list, press the **Menu** button to display the menu.
2. Select the **Backup** option using the **Up** or **Down** arrow buttons.
3. Press the **OK** button to confirm.

```
Select Device
USB Device (8MB)

Clear All Data? (OK/Cancel)
```

The AP-5004 detects if there is a backup device connected to it and starts backing up data.



Note: The AP-5004 will begin to collect data as soon as the above screens are displayed. When the required data has been collected, the backup can begin.

4.6 System Maintenance

Press the **Menu** button on the remote control to display the main menu on screen. Use the **Up** and **Down** arrow buttons to select one of the five options and press the **OK** button to confirm your choice.



4.6.1 Alarm log

Any alarm will be written into alarm log include video loss, disk error....etc. User can search alarm log by specific time.

1. Press “ok” button on “alarm log” option
2. There are many ways to quickly reach alarm log information. Include search by time, directly list all log, or only GPI, GPO or motion triggered log....
3. After selected one of the searching way, user can see the log and press “ok” button to enter submenu to get more detail information of log.



Alarm Log (1/26)		
20060302	16:10	Motion
20060302	16:10	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
20060302	16:09	Motion
		Next
Detail		
Time	-	20060316 18:48:55
Event	-	Motion
Device	-	1
Text	-	N/A
Addr	-	N/A

4.6.2 System log

Any operation will be written into system log include local operation and remote operation. User can search system log by specific time.

System Log (1/48)		
060302	16:07:29	Pre_Alarm
060302	16:07:19	GPI_Trigger
060302	16:07:07	GPI_Trigger
060302	16:02:44	ISP
060302	16:01:53	Camera
060302	16:01:31	Serial_Por
060302	15:53:42	Video_Inpu
060302	15:47:52	Sys_Start
060302	15:47:27	Run_Mode
060302	15:47:02	Sys_Start
060302	15:43:24	Playback
060302	15:41:20	Playback
060302	15:40:12	Playback
060302	15:37:22	Sys_Start
060302	15:35:49	Sys_Start
060302	15:34:04	Sys_Start
060302	15:30:25	Playback
060302	15:29:49	Playback
060302	15:28:51	Playback
060302	15:28:19	Rec_Schedu

4.6.3 Default settings

Use the **Default Settings** option to reset all configurable parameters to their factory default settings.

When the **Default Settings** option is chosen from the **System Setup** menu, a message is displayed asking you to confirm. Press the **OK** button to confirm, or the **Cancel** button to cancel the operation.

4.6.4 Configuration file

User can backup or restore system configuration values to or from a file. Use Up and Down arrow buttons to select either **Backup** or **Restore Configuration**.

Backup / Restore	
Backup Configuration	
Restore Configuration	

4.6.5 Revise firmware

Use the **Revise Firmware** option to upgrade the firmware in the AP-5004. The firmware can be revised through an external read-write CD drive, a USB flash drive, or a USB thumb drive. Connect the device to the AP-5004 and then use this option.

```
Select Device
Kingston DataTraveler 2.
File List
system.bin.en.600b1_031
```

4.7 System Shutdown

Use the **System Shutdown** option to shut down or reboot the system. To shut down or reboot the system:

1. Use the **Up** and **Down** arrow buttons to select either Shutdown or Reboot.

```
System Shutdown
Shutdown
Reboot
```

2. Press the OK button to confirm.
3. Press the **OK** button to confirm the operation again, or press the Cancel button to cancel the operation.

Chapter 5. APEC Network Operation

5.1 Introduction

AP-5004 can also be configured over a network using a PC running standard web browser. This chapter covers network operation. Before you can access AP-5004 from remote PC client, you need to install DCS Plug-in software. This is a one time effort. **Please refer to Chapter 6 for how to install it.**

5.2 Connecting

The AP-5004 GUI can be viewed from a Windows IE browser when the device is connected on the same network as your PC or if it is connected through a cable or xDSL modem to the Internet. Refer to the hardware manual for more information about making connections using the RJ-45 Ethernet (LAN) port. Make sure that the AP-5004 is configured for **Network** running mode.

To access the AP-5004 from remote browser:

1. Open a browser window on a terminal that has network access to the AP-5004.
2. Type the IP address of the AP-5004 in the browser address bar.

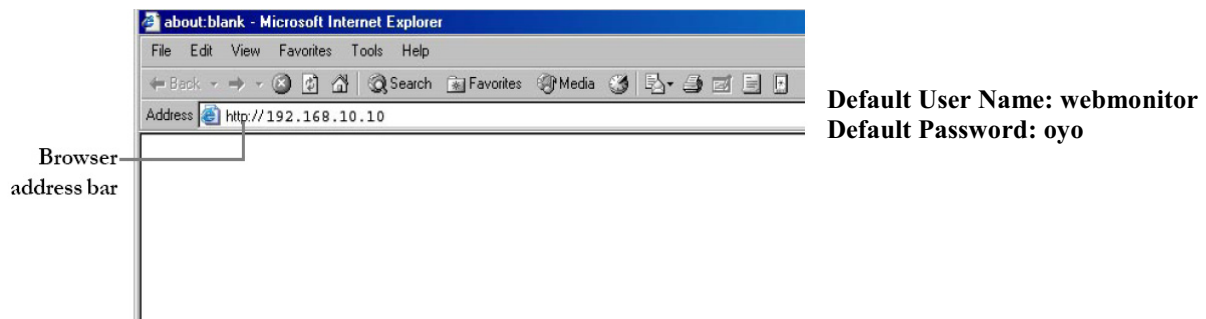


Fig. 5-1

If everything is OK, you will get the image of Fig. 5-5 on your VGA screen.

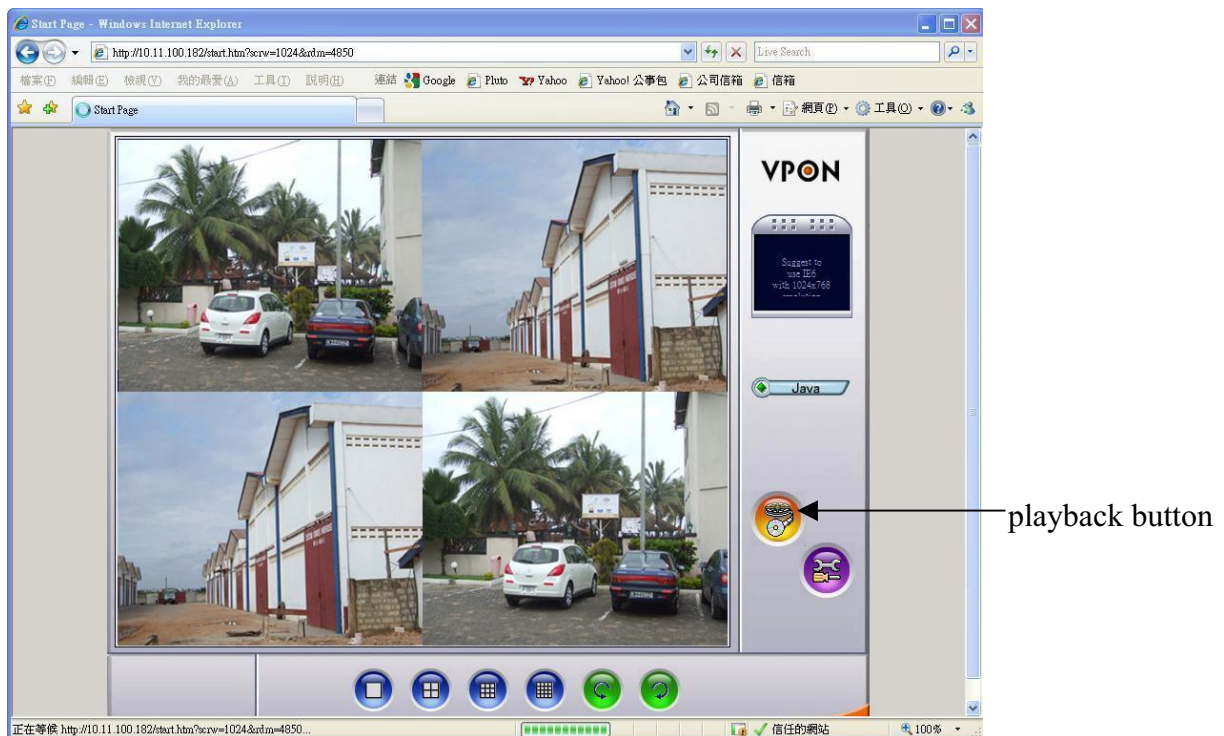


Fig. 5-5

5.3 Surveillance screen panel

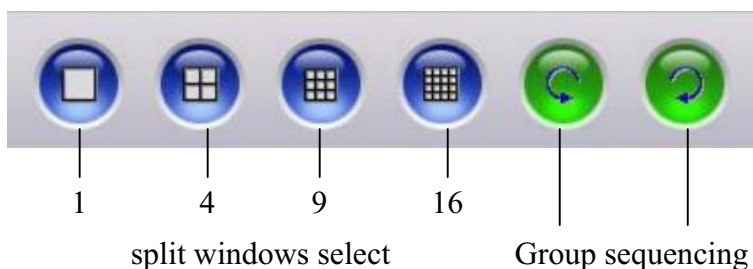


Fig. 5-6

The split windows selection icons are there for your selection to show the camera videos on local screen. It can be 1/4/9/16 splits. The group sequencing icons are for changing camera videos shown on the local screen in grouping sequence.



5.4 Playback button

Click the **Playback** button on Fig. 5-7 to playback record files. Please refer to section 5.12 for detail operations.



Fig. 5-7

5.5 Remote PTZ control

When click the single split window button on Surveillance Screen Panel as of **Fig. 5-6**, if that camera is configured as PTZ camera, then, the remote PTZ control screen will be brought up as Fig. 5-9. The numbers from 1 to 16 are for “PRESET” & “RECALL” selection. There are also buttons for “IRIS”, “ZOOM” and “FOCUS” adjustments. The 4 red arrows at in the bottom circle are for camera movement control. The yellow dot is for moving speed control.

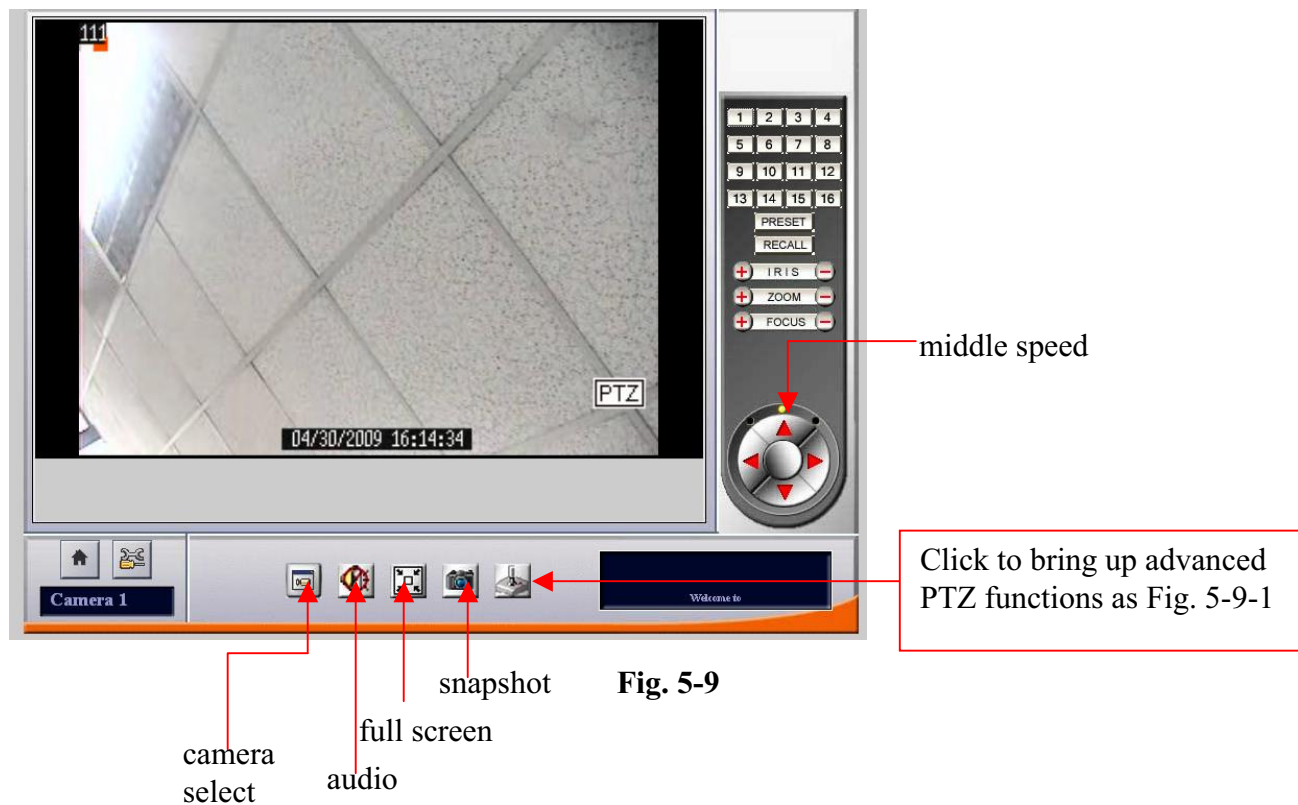


Fig. 5-9

5.5.1 Advanced PTZ function

Fig. 5-9-1 is the screen for Pelco D type PTZ control. You can do “Auto Pan”, “Patrol”

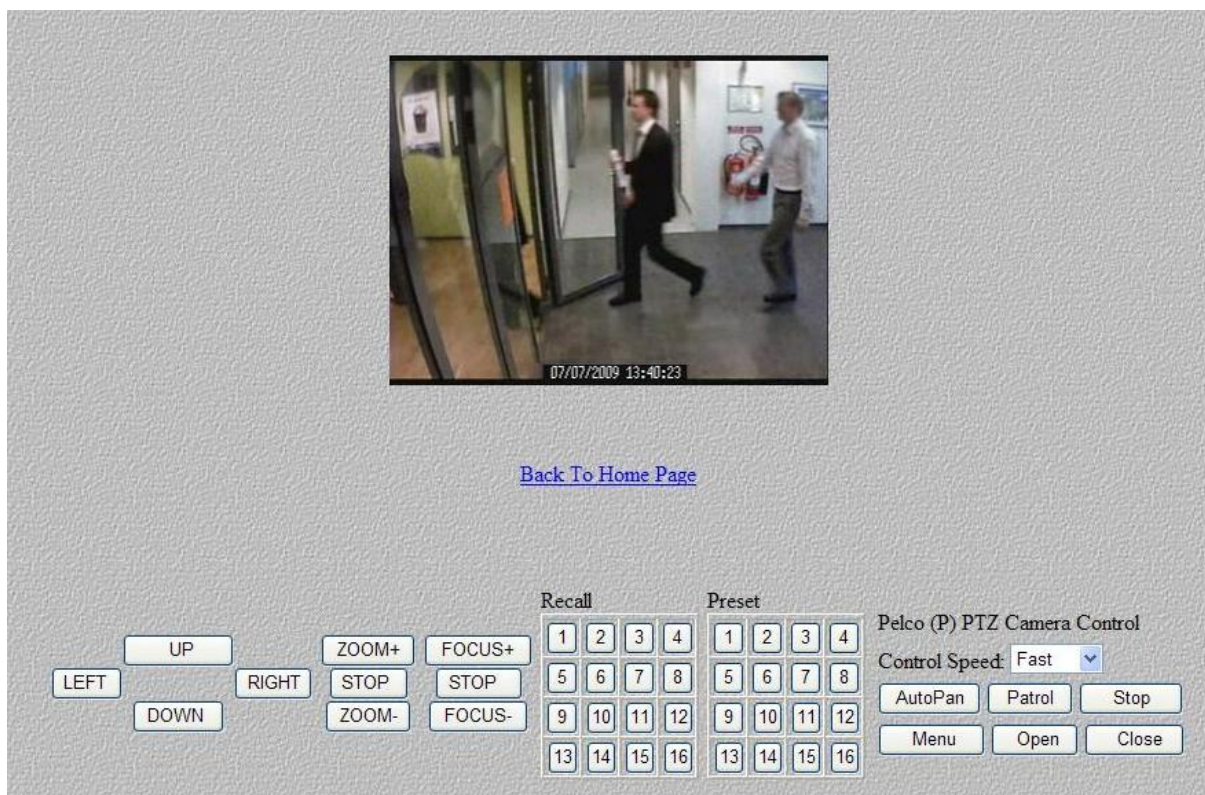
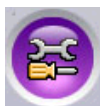


Fig. 5-9-1

and open OSD menu, in addition to what you can do on Fig. 5-9 The PTZ functions and screen layout here is different for different brands.



5.6 System Setup

Click the SETUP button to display the setup screen as Fig. 5-11.

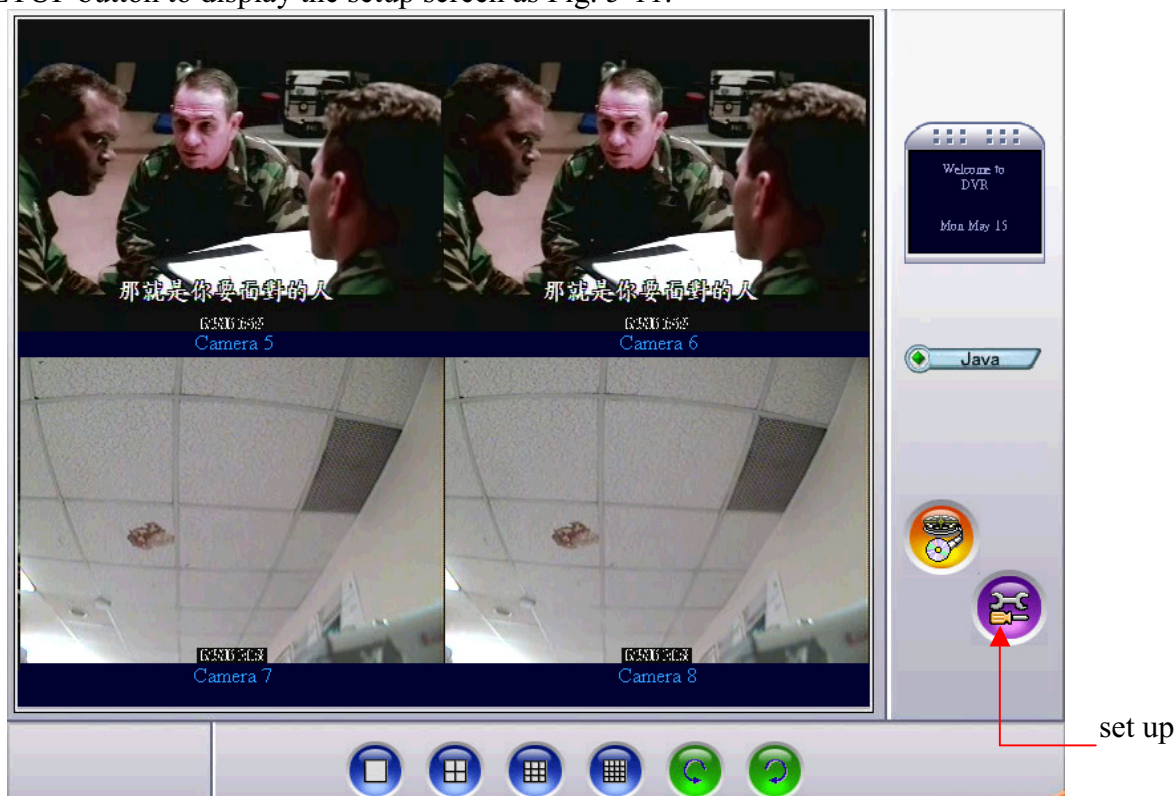


Fig. 5-10

Use the setup screen to change user definable parameters for the AP-5004. Choose a submenu from the list on the left and click the link to display it.



Fig. 5-11

5.6.1 Camera Setting

Select the camera that you want to adjust from the “Video Source” field. Video standard is NTSC or PAL selectable. Values of “Brightness”, “Contrast”, “Saturation” and “Hue” are default at “50”. The “Quality” is set default at “80”, an acceptable level. You can adjust it higher for better quality. But, please remember, **do NOT make it at “100”**. Because the quality level higher than 90 makes little difference to video improvement, but makes the video data size becomes much larger and this is no good for remote transmission, especially when the network bandwidth is small

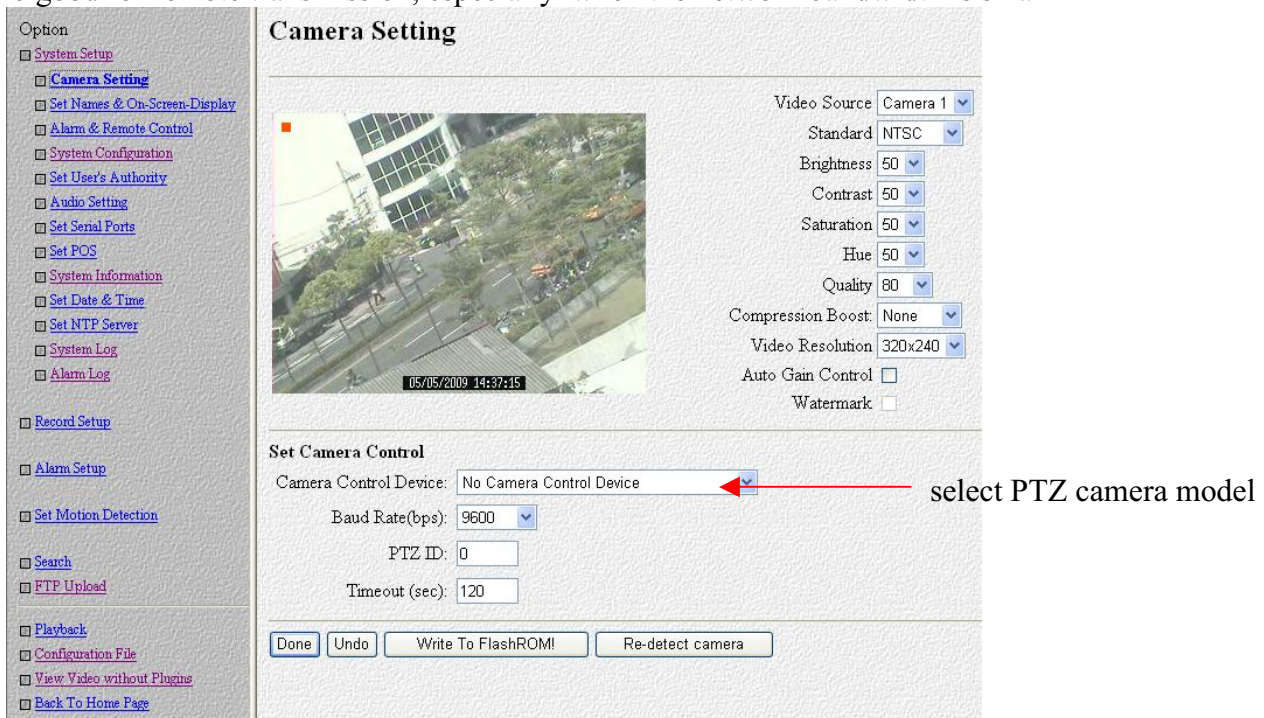


Fig. 5-12

The “compression boost” function is ONLY good when H.263 compression is selected. “Video resolution” can be 320x240 or 640x480. “Auto Gain Control” is good for adjusting video signal input level automatically. There is no selection for “Watermark” because this function is always enabled.

You can also configure the camera for PTZ control here. The “Camera Control Device” field is for PTZ camera model selection. You need also to fill in “Baud Rate” and “PTZ ID”, which need to match the setting with PTZ camera. The “Timeout” is, when a remote user logs in and gets PTZ control of this camera, he will have the number of seconds to control this camera. When the time expires, the control authority will be grand to other users.

The “Re-detect camera” button is used when the camera loses connection. After finish the setting, click “Done” to save the changes or click “Write To FlashROM” to prevent from configuration lost after a power off and power on initialization of AP-5004.

5.6.2 Set name & on screen display

Use the **Set Names and On-Screen Display** page to set server names of AP-5004 and all cameras. You can also use this page to key in text to be displayed on screen with each camera under the **Set Overlay Text** option. Use the x and y fields to position the displayed text. Use **Set Time Stamp** option to define the format of the time stamp. And “Time Stamp” has only 6 fixed positions to be located.

Set Names & On-Screen-Display

Set Names of Server and Cameras

Server Name	DVR
Camera 1	Camera 1
Camera 2	Camera 2
Camera 3	Camera 3
Camera 4	Camera 4
Camera 5	Camera 5
Camera 6	Camera 6
Camera 7	Camera 7
Camera 8	Camera 8

Fig. 5-13

5.6.3 Alarm & remote control

The GPI state can be NO(normally open) or NC(normally close). When NO is selected as shown below, AP-5004 generate alarm if the GPI state changes to “close” by external event. There are maximum 8 GPI and GPO points in a AP-5004 depends on the IO device installed. The state of GPO can be “ON” or “OFF” . When “OFF” is selected as below, it means the output points are “open” and when “ON”, it means “close”.

Alarm Status & Remote Control Page

Alarm Status

GPI 1	GPI 2	GPI 3	GPI 4	GPI 5	GPI 6	GPI 7	GPI 8
NO ▼	NO ▼	NO ▼	NO ▼	NO ▼	NO ▼	NO ▼	NO ▼

Reload this page to update the Alarm Status.

Remote Control

GPO 1	GPO 2	GPO 3	GPO 4	GPO 5	GPO 6	GPO 7	GPO 8
OFF ▼	OFF ▼	OFF ▼	OFF ▼	OFF ▼	OFF ▼	OFF ▼	OFF ▼

← click to make the changes into effect

Fig. 5-14

5.6.4 System configuration

Use the **System Configuration** page to set the following parameters for the AP-5004.

- **Running mode** – Select “**Network Mode**” if AP-5004 is connected to local LAN through its RJ-45 LAN port. Select “**ISP Mode**”, if it is connected to Internet via dial up telephone.
- **TCP/IP setting** – This is normally for “**Network Mode**” only because when “**ISP Mode**”, the IP, DNS, Gateway and Subnet Mask are all assigned by Internet Service Provider.
- **ISP setting** – Fill in for dial-up connection to Internet through telephone line.

System Configuration

Running Mode
☒ Network Mode ☐ ISP Mode

TCP/IP Setting
 IP Address: 10.11.100.193
 DNS IP Address: 168.95.1.1
 Gateway IP Address: 10.11.9.35
 Subnet Mask: 255.255.0.0
☒ Support low-bandwidth connection

ISP Setting
 ISP Phone Number: 1
 ISP Login Name: WEBMONITOR
 ISP Login Password: OYO
 Modem Baud Rate: ☐ 115200 ☒ 57600 ☐ 38400 ☐ 28800
☒ Use assigned TCP/IP settings

This is ONLY good for compression algorithm selected as JPEG

when this is checked, AP-5004 will use the TCP/IP settings you filled in and don't care about ISP's value.

Fig. 5-15

- **Account Setting** – This is for remote login account set up. Here you can have one administrator and one user.
- **Set Video Compression Algorithm** – Selectable MPEG4 / H264 / JPEG / MJPEG here.
- **Set IP Registry Host IP Address & Path** – This function is good for AP-5004 that is working at ISP mode or dynamic IP. It directs AP-5004 to do registry at a registry server and then, remote PC client can access through registry server to find the AP-5004 unit. The URL of registry server in Formosa21 is <http://www.apecdvr.com>

Account Setting
 User's Name: WEBMONITOR User's Password: OYO
 Administrator's Name: WEBMONITOR Administrator's Password: OYO

Set Video Compression Algorithm
 Video Encoding Algorithm: MPEG4 (Low Bandwidth)

Set IP Registry Host IP Address & Path
 Registry Host Address:
 Register HTTP Port As:
 Registry Host Port:
 Registry Host Path:
 Visibility in Registry Server: ☐ Only can be queried ☒ Listed on Registry Server

URL of registry server or IP address

Warning! Update system configuration data will write the FlashROM and REBOOT system!

Done Undo

Fig. 5-16

When you access <http://www.apecdvr.com>, you will get the screen as Fig. 5-17. You can then enter the MAC ID or server name of the AP-5004 that you want to search. In this example, we used server name “DVR” and we did get one machine. You then need to login using proper user name and password to see the video. Please be noted, it is better to search by MAC ID or using a unique server name in order to get the machine you really want.

[Browse all records](#)

Find a record in registry server, find machine by either MacID or Name.
MacID is recommended, because it's unique.

Search by Mac ID (Ethernet Address):

Search by Name:

Found successfully! Now linking to <http://59.126.41.36>, please wait a moment..



Fig. 5-17

5.6.5 Set user's authority

Users created here can ONLY login from remote IE browser. You can create up to 256 users here. Enter user number in the **User** field. Assign name and password in the respective fields. You can prevent this user to access the particular cameras by “Disable” it. The authority of PTZ Control and Playback functions can also be limited when necessary.

Set User's Authority

<< Prev User: [input field] Next >>

Name: [input field]

Password: [input field]

Camera 1: Enable [v]

Camera 2: Enable [v]

Camera 3: Enable [v]

Camera 4: Enable [v]

Camera 5: Enable [v]

Camera 6: Enable [v]

Camera 7: Disable [v]

Camera 8: Disable [v]

Camera Control: Disable [v]

Audio: Disable [v]

Playback: Disable [v]

Done Undo

[Users Listing](#)

enter sequence number here, 1 - 256

list only remote created users

Fig. 5-18

5.6.6 Audio setting

AP-5004 can support ONLY one audio source from mother board or sound card. So, on Fig. 5-19, the audio source is either “NULL” or “Audio1(MB)”. The “Microphone Gain” and “Speaker Volume” are for audio signal level adjustment. The “Timeout” fields of Microphone and Speaker Control are the number of seconds that a remote login user can access the microphone and speaker. The arrow button on top of Fig. 5-19 is to click for two way audio communication between remote PC client to AP-5004. After click it, the audio panel is brought up as Fig. 5-20. The green data rate bar indicates that the two way audio link is established and the transmission speed indicates the bandwidth consumption for this audio link. You need to click microphone button ON for talking with AP-5004. You can select the audio source that you want to record with each camera. But for now, there is ONLY one source “Audio1(MB)”.

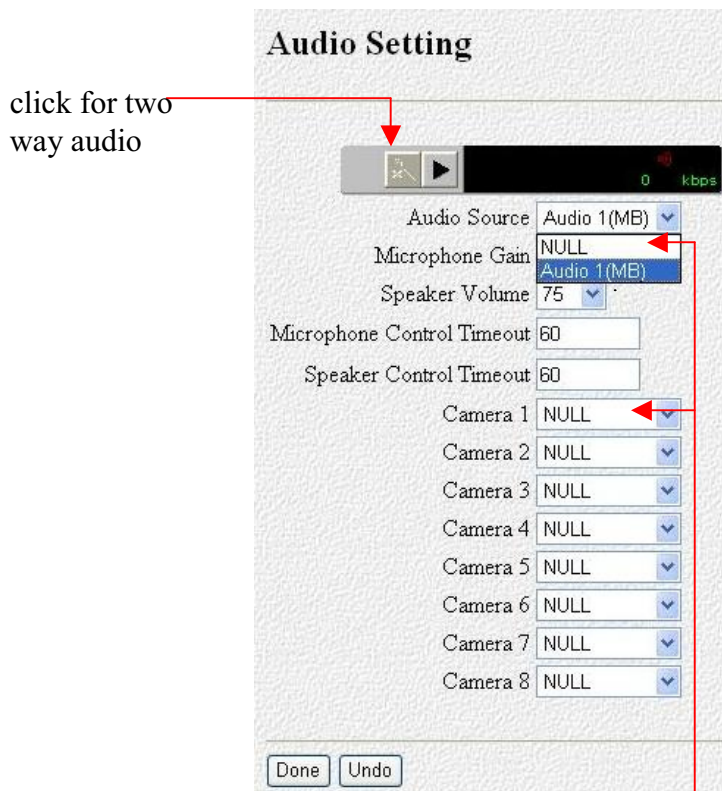


Fig. 5-19

select source

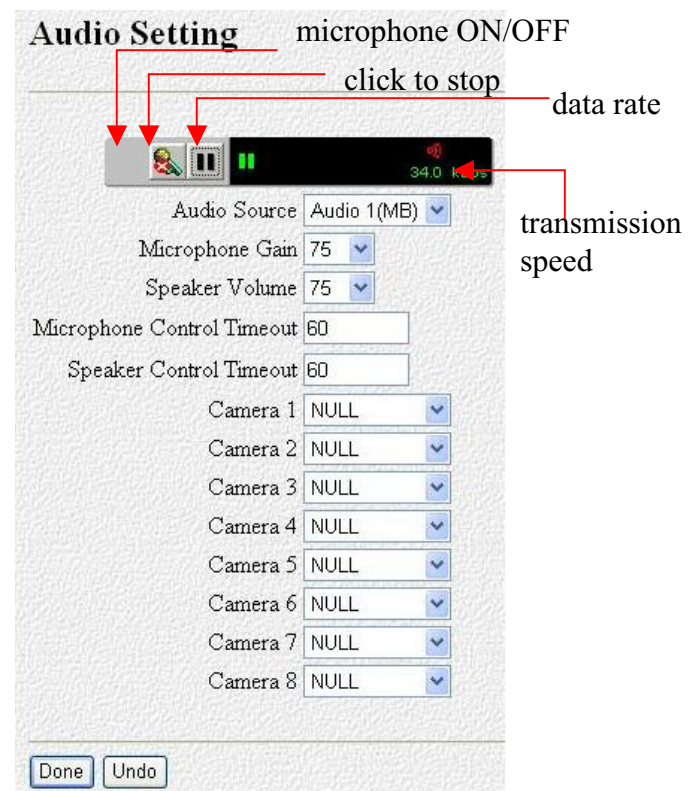


Fig. 5-20

5.6.7 Set serial port

AP-5004 has 2 serial ports built-in. COM1 is RS232, 9 pin D type. COM2 is RS485, 2 pin at the back panel slot. COM1 is default for modem connection and COM2 for PTZ control. You probably need to enter modem initialization string for successful modem connection. “Hardware Flow Control” should be “Disable” for modem device and “Enable” for “PTZ camera control”.

The serial port device can be PTZ Camera Control, GPIO or Data capture, selectable.

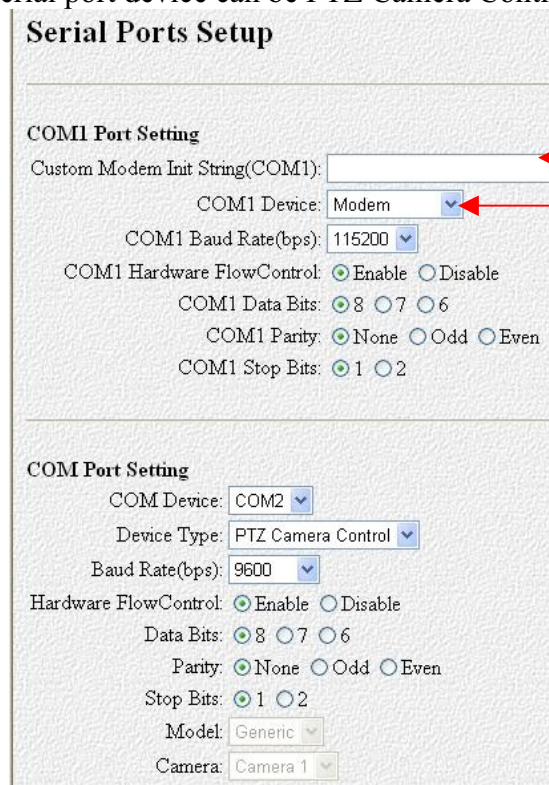


Fig. 5-21

key in modem initialization string here.

drag to select “modem”, “PTZ”, “GPIO” or “Data capture” device. **It is NOT recommended to select “voice call” unless you can find a valid modem for this purpose.**

The NETI/O Setting is used only when you have VP-204 connected to this AP-5004. VP-204 is a RS232 to LAN converter for POS till machine integration with AP-5004. When connect VP-204 to the same LAN segment of VP-5004, it will detect VP-204 and you can then select it at the “Port” field of Fig. 5-22. You can have multiple VP-204 units on the LAN. The “Device Type” for VP-204 is “Data Capture”. The “ID” shows MAC ID of the selected AP-204 and “Status” shows if it is alive on the LAN.

Fig. 5-22

5.6.8 Set POS

Here you can set up POS overlay text relay with camera. POS text may come from COM ports or AP-204 RS232 to LAN converters. You can also set POS text font type, color, size, background and position on the camera screen. The “Clean POS Text” and “POS Text Clean Time” let you clear up POS text on the camera screen based on the number of seconds you set.

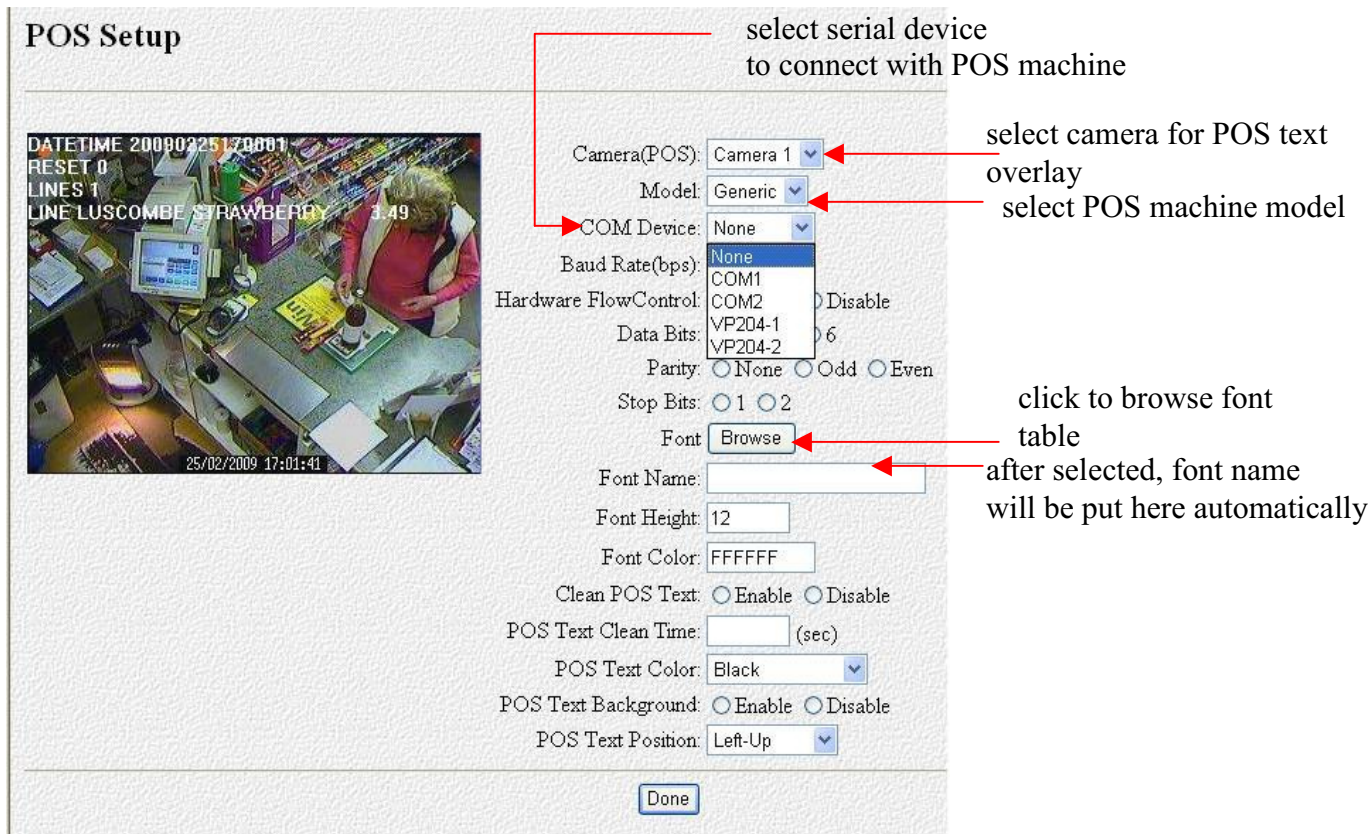


Fig. 5-23

5.6.9 System information

Click the **System Information** link to display the **System Information** page.

Option

- ☐ System Setup
 - ☐ Camera Setting
 - ☐ Set Names & On-Screen-Display
 - ☐ Alarm & Remote Control
 - ☐ System Configuration
 - ☐ Set User's Authority
 - ☐ Audio Setting
 - ☐ Set Serial Ports
 - ☐ Set POS
 - ☐ System Information
 - ☐ Set Date & Time
 - ☐ Set NTP Server
 - ☐ System Log
 - ☐ Alarm Log
- ☐ Record Setup
- ☐ Alarm Setup
- ☐ Set Motion Detection
- ☐ Search
- ☐ FTP Upload
- ☐ Playback
- ☐ Configuration File
- ☐ View Video without Plugins
- ☐ Back To Home Page

System Information

Item	Content
Boot From	DOM/CompactFlash/Disk
Flash Size	128 MB
IP Address	10.11.100.193
Subnet Mask	255.255.0.0
Ethernet Address	00:0A:48:1F:DA:A3
Start Time	2009/04/30 14:33:36
Accumulated Visit	5
Disk Size	82327 MB
Disk Used	80494 MB (97.7%)
Record Period	89 Hours

Driver Version: 1.2.38
Kernel Version: 2.6.23.1
Firmware Version: 1.5.1_IVS build 037
Firmware Date: Apr 27 2009 16:23:51

GWMAIN Start at 04/30/2009 14:33:40 We are in Network (STATIC IP) Mode RQ(10.11.7.35@20090430-152000) GET / RQ(10.11.100.200@20090430-152456) GET / RQ(10.11.7.1@20090505-112139) GET / RQ(10.11.7.35@20090505-113150) GET / RQ(10.11.7.1@20090505-114623) GET /almlog.htm?scrw=0&rdm=4121

Fig. 5-24

No information on this page is changeable.

5.6.10 Set time and date

Use the **Set Time and Date** page to set the time and date. Select a time zone from the drop down menu and enter new local time and date using the keyboard. Click **Done** when all fields are updated. Click **Undo** to revert to original settings. If you change the time zone, the system will reboot.

Set Date & Time

Time zone: (GMT+08:00) Taipei

Date (YYYY/MM/DD): 2009/05/06

Time (HH:MM:SS): 12:13:06

Warning! Change Time Zone will REBOOT system!

Done Undo

Fig. 5-25

5.6.11 Set NTP server

You can use “**Set NTP Server**” to configure a NTP (Network Time Protocol) server for synchronization of AP-5004 internal system clock. Select a server and enable it using the drop down menus. Enter a time period using keyboard for the period of synchronization. Click **Done** when all parameters are entered correctly. Click **Undo** to revert to original settings.

NTP Setup

Enable: Yes

Period: 1 hour

Server: ntp2b.mcc.ac.uk

Server Setup:

Done Undo

Fig. 5-26

5.6.12 System Log

Any operation will be written into system log include local operation and remote operation. User can search system log by specific time.

Option

- ☐ System Setup
 - ☐ Camera Setting
 - ☐ Set Names & On-Screen-Display
 - ☐ Alarm & Remote Control
 - ☐ System Configuration
 - ☐ Set User's Authority
 - ☐ Audio Setting
 - ☐ Set Serial Ports
 - ☐ Set POS
 - ☐ System Information
 - ☐ Set Date & Time
 - ☐ Set NTP Server
 - ☐ System Log
 - ☐ Alarm Log
- ☐ Record Setup
- ☐ Alarm Setup
- ☐ Set Motion Detection
- ☐ Search
- ☐ FTP Upload
- ☐ Playback
- ☐ Configuration File
- ☐ View Video without Plugins
- ☐ Back To Home Page

System Log

Time: 2009 / 5 / 5 11 : 59 : 38

<< prev 1/8 next >>

Date	Time	Event	Addr	User	Note
2009/04/30	15:23:34	Playback	10.11.7.35	WEBMONITOR	2009-04-30 10:00:00
2009/04/30	15:23:07	Playback	10.11.7.35	WEBMONITOR	2009-04-30 10:00:00
2009/04/30	15:22:18	Playback	10.11.7.35	WEBMONITOR	2009-04-30 10:00:00
2009/04/30	15:22:01	Playback	10.11.7.35	WEBMONITOR	2009-04-30 08:00:00
2009/04/30	15:19:50	TCPIP	N/A		
2009/04/30	15:04:35	SMS Server	N/A		Camera 8
2009/04/30	15:04:35	SMS Server	N/A		Camera 7
2009/04/30	15:04:35	SMS Server	N/A		Camera 6
2009/04/30	15:04:35	SMS Server	N/A		Camera 5
2009/04/30	15:04:35	SMS Server	N/A		Camera 4
2009/04/30	15:04:35	SMS Server	N/A		Camera 3
2009/04/30	15:04:35	SMS Server	N/A		Camera 2
2009/04/30	15:04:35	SMS Server	N/A		Camera 1
2009/04/30	15:04:35	Configure	N/A		
2009/04/30	15:04:35	Alarm_Center	N/A		

Fig. 5-27

5.6.13 Alarm Log

Any alarm will be written into alarm log including motion trigger、GPIO trigger、Disk error、Video loss、POS event.....etc. User can search alarm log by specific time and double click one of the alarm log on the list to play specification-recording data.

Option

- ☐ System Setup
 - ☐ Camera Setting
 - ☐ Set Names & On-Screen-Display
 - ☐ Alarm & Remote Control
 - ☐ System Configuration
 - ☐ Set User's Authority
 - ☐ Audio Setting
 - ☐ Set Serial Ports
 - ☐ Set POS
 - ☐ System Information
 - ☐ Set Date & Time
 - ☐ Set NTP Server
 - ☐ System Log
 - ☐ Alarm Log

Alarm Log

Time: 2009 / 5 / 5 11 : 49 : 59 List ALL

There are 143 records found.

<< prev 1/8 next >>

Date	Time	Event	Addr	Device	Text
2008/03/18	16:10:19	No Disk	N/A	hdb	N/A
2008/01/17	14:55:29	No Disk	N/A	hdb	N/A
2008/01/17	14:15:36	No Disk	N/A	hdb	N/A
2008/01/17	13:54:05	No Disk	N/A	hdb	N/A
2008/01/17	11:48:43	No Disk	N/A	hdb	N/A
2008/01/17	11:32:21	No Disk	N/A	hdb	N/A
2008/01/17	10:50:02	No Disk	N/A	hdb	N/A
2008/01/17	10:10:10	No Disk	N/A	hdb	N/A

Fig. 5-28

5.7 Record Set Up

5.7.1 DVR setup

Use **DVR Setup** page to set the recording mode to either **Auto Stop** (stops when disk space runs out) or **Cyclic Recording** (overwrites oldest recordings when disk space runs out).



Fig. 5-29

5.7.2 Record schedule

You can set up max. 16 record schedules here. The combination of the schedules are in “OR” rule. For example, if you set a camera to record on Monday 13:00 to 16:00 at schedule#1 and at schedule#2, you set this camera to record on Monday also, from 09:00 to 12:00. If you enable both these two schedules, then, this camera will record on Monday, from 09:00 to 16:00.

If you set “Start Time” and “Stop Time” both at “00:00:00”, that means always recording to AP-5004. You can select the recording criteria of each camera from following conditions:

1. Normal Recording – record continuously
2. Motion Detection recording – Record when motion trigger
3. GPI trigger recording – Record when GPI trigger

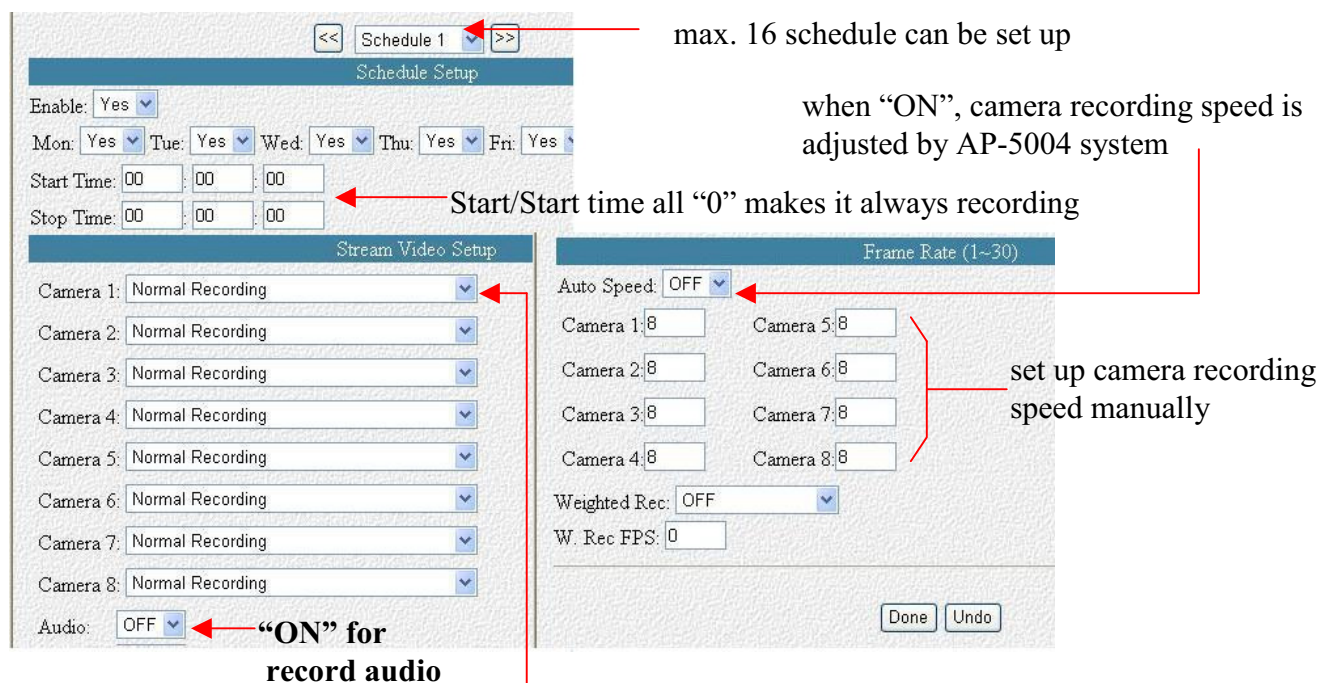


Fig. 5-30

Selectable : 1. Normal 2. Motion Detect 3. GPI trigger 4. Motion & GPI 5. Text

4. Motion & GPI trigger Recording – Record when Motion Detection **OR** GPI trigger

5. Text Recording - Record when POS text received

The recording frame rate of each camera can be configured. But the total number of frame rate adds up by all cameras can NOT exceed the system frame rate of AP-5004. Please refer to AP-5004 specification for total system frame rate. When configure record frame rate of each camera, you need

to turn “OFF” Auto Speed.

Weight recording is a special feature of APEC machines for efficient use of system resources. When turn “ON” “Weight rec:” field, the camera that receives event trigger, such as Motion Detection, or GPI trigger, will record at the frame rate set on “W. RecFPS” field. This function makes cameras able to record at higher frame rates when something happen and lower frame rate when nothing. This saves huge storage space, which is an expensive resource of the system. But in any way, the total number of frame rate can NOT exceed AP-5004 system frame rate. So, if there are too many concurrent triggers to the cameras, you may not have the exact frame rate you set for weight recording.

5.7.3 GPI Trigger Recording

Click **GPI Trigger Recording** to bring up **Fig. 5-31**. There are max. 8 GPI to be selected. Each GPI trigger can record different cameras. You can set different record time for each GPI. Please remember to enable the setting and click “Done” after finishing.

5.7.4 POS Text record

When AP-5004 is connected with POS till machine, you can set it up to record when POS text received. Recording can be ONLY when specific POS text strings which are defined as “POS Event” or whenever text received based on your selection at **Fig. 5-32**. Others are the same as **Fig. 5-31**.

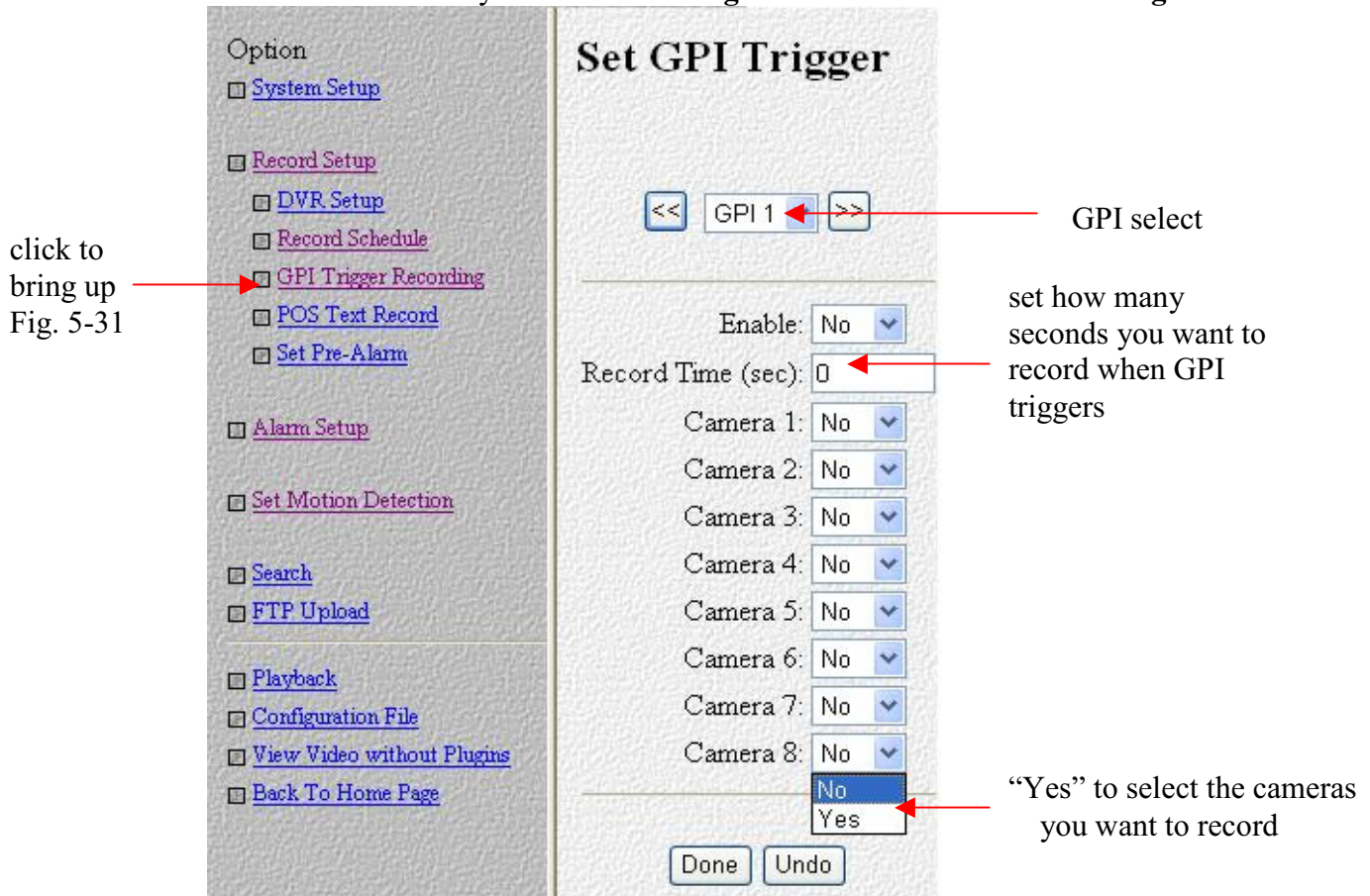
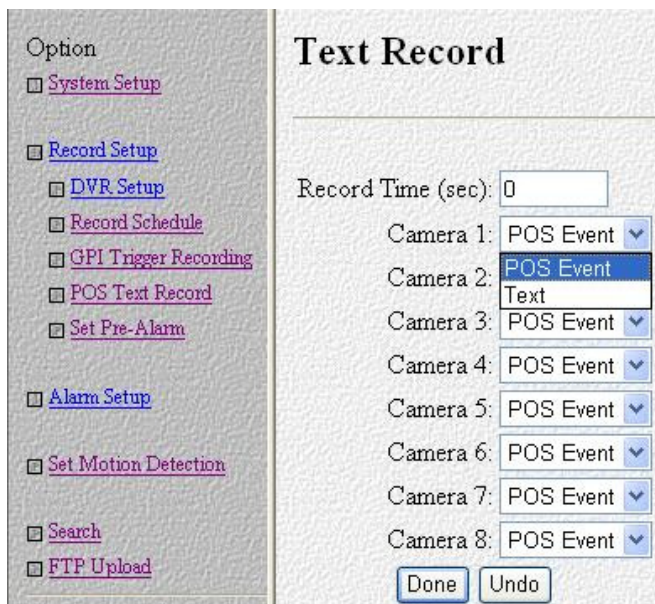


Fig. 5-31

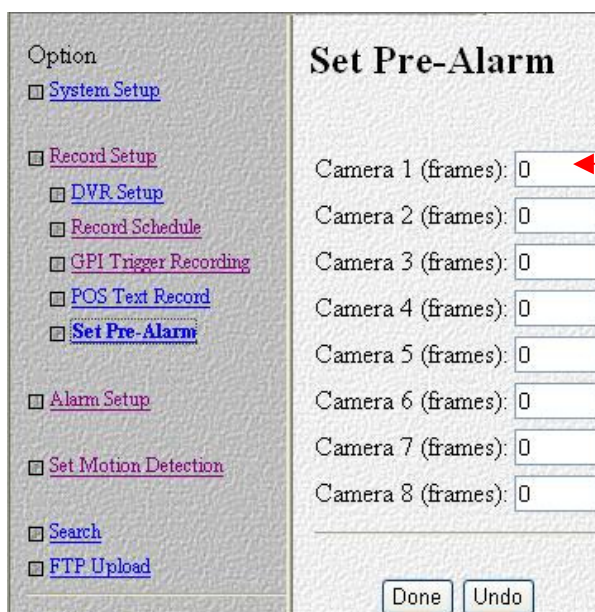


select POS event or text. When POS event, only special text string defined as “event” triggers the record. When text, any POS text received, triggers the record

Fig. 5-32

5.7.5 Set Pre-alarm

You can set each camera to record before alarm happens. The maximum number of frames a camera can record for “Pre-Alarm” is 300 frames.



set number of frames to record before alarm trigger

Fig. 5-33

5.8 Alarm Set Up

5.8.1 E-mail set up

AP-5004 can send E-mail with camera snapshots when alarm happens. The alarm includes GPI, Motion Detection, Video Lost, Disk Space Low, Disk error and POS event. You select from “Type” field of Fig. 5-34 for the alarm type that you want to send e-mail. The “Start Time” and “Stop Time” fields for your selection of the time period that you want to send e-mail when alarm. At “To:” field, enter the destination e-mail address. Check the “Snapshot Camera” boxes for images to attached with the e-mail. The “Global Settings” area is for configuration of mail server data and is common for all kinds of alarm. You need a mail server account to send mails. The “Interval” field is for the number of seconds in between two contiguous mails in order NOT to bombard the mail server with too many mails.

5.8.2 POS event set up

When AP-5004 receives text sent from POS till machine, you can define some special text strings to be “POS Event”. For example, when the string “void” is received, you may consider this as an abnormal situation and want AP-5004 to generate alarm. This is what POS event used. The configuration is straight forward as Fig. 5-35

Option

- ☐ System Setup
- ☐ Record Setup
- ☐ Alarm Setup
 - ☐ E-Mail Setup
 - ☐ POS Event Setup
 - ☐ GPO Alarm Setup
- ☐ Set Motion Detection

POS Event Setup

POS Event Text

Event: Event 1

Text:

Done Undo

you can define 20 events here

enter text here

Fig. 5-35

Option

- ☐ [System Setup](#)
 - ☐ [Camera Setting](#)
 - ☐ [Set Names & On-Screen-Display](#)
 - ☐ [Alarm & Remote Control](#)
 - ☐ [System Configuration](#)
 - ☐ [Set User's Authority](#)
 - ☐ [Audio Setting](#)
 - ☐ [Set Serial Ports](#)
 - ☐ [Set POS](#)
 - ☐ [System Information](#)
 - ☐ [Set Date & Time](#)
 - ☐ [Set NTP Server](#)
 - ☐ [System Log](#)
 - ☐ [Alarm Log](#)
- ☐ [Record Setup](#)
- ☐ [Alarm Setup](#)
 - ☐ [E-Mail Setup](#)
 - ☐ [POS Event Setup](#)
 - ☐ [GPO Alarm Setup](#)
- ☐ [Set Motion Detection](#)
- ☐ [Search](#)
- ☐ [FTP Upload](#)
- ☐ [Playback](#)

Individual Settings(English Alphabet Only)

Type: ← selectable GPI, Motion Detection, Video Lost, Disk Space Low, Disk error, POS event

Start Time: : :

Stop Time: : :

To: ← destination e-mail address

Subject:

Content:

*Snapshot: Camera ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

Enable:

* Required field

Global Settings

*Mail Server: ← Please remember to set up DNS IP in "System Configuration" if you use a domain name here in stead of physical IP

Account:

Password:

*From:

*Interval(sec):

Fig. 5-34

5.8.3 GPO Alarm set up

No need to do anything here.

5.9 Set Motion Detection

The red rectangle in the upper left corner of **Fig. 5-35** indicates that motion is being detected. You can use mouse drag or click the small rectangles one by one to assign the areas that you want to do detection.

Set Motion Detection

Video Source:

Motion Detection:

Sensitivity:

Left Button - Set Detection-Area

Right Button - Clear Detection-Area

Fig. 5-35

5.10 Search

This is the same as Fig. 5-32. Please refer to section 5.6.17, playback.

5.11 FTP Upload

AP-5004 can upload snapshots from the camera using FTP to a predefined location in the event of an alarm. Use the **FTP Upload** page to set FTP details.

The screenshot displays the 'FTP Upload' configuration page. On the left is a sidebar with navigation links: Option, System Setup, Record Setup, Alarm Setup, Set Motion Detection, Search, FTP Upload (highlighted), Playback, Configuration File, View Video without Plugins, and Back To Home Page. The main area is divided into two sections: 'Individual Settings' and 'Global Settings'.

Individual Settings:

- Type:** A dropdown menu currently set to 'GPI 1'. A red arrow points to it with the text: 'selectable GPI, Motion Detection or continuous'.
- Start Time:** Three input fields for HH:MM:SS, currently showing 00:00:00.
- Stop Time:** Three input fields for HH:MM:SS, currently showing 00:00:00.
- Directory:** A text input field.
- Filename:** A text input field. A red arrow points to it with the text: 'when empty, AP-5004 will generate the file name automatically in following format :
IP-CH#-yymmddhhnn-xx
If file name is entered, then, AP-5004 will always uses this filename without change.'
- *Snapshot:** A row of checkboxes for cameras 1 through 8. Camera 1 is checked.
- Enable:** A dropdown menu with 'Disable' selected.
- * Required field:** A dropdown menu with 'Enable' selected.

Global Settings:

- *Ftp Server:** A text input field.
- *Account:** A text input field.
- *Password:** A text input field.
- *Port:** A text input field with '21' entered.

At the bottom right are 'Done' and 'Undo' buttons.

Fig. 5-36

Under the **Individual Settings**, specify the type of event that causes the E-mail to be sent in the **Type** field by choosing **GPI**, **Motion Detect** or **Continuous**. Fill in the start and stop time for the period of a day to do FTP upload. The file name and directory for FTP are also necessary. Enable camera image snapshot to be uploaded by selecting cameras in the **Snapshot** option.

ON the **Ftp Server** field, you can put domain name or IP address. But when domain name is used, you need to set DNS IP address in **System Configuration**

The “file name “ field needs to pay particular attention. When it is empty, AP-5004 will generate the file name automatically in following format : IP-CH#-yymmddhhnn-xx, where “IP” is the IP address of AP-5004, “CH#” is the channel number of the camera ,”yymmddhhnn” is the year, date, time and “xx” is the sequential number of that snapshot .If file name is entered, then, AP-5004 will always uses this filename without change.

5.12 Playback

Click “Playback” to bring up Fig. 5-37 with Fig. 5-38 follows. Click **List All** to display the entire list. There are some kinds of search :

1. By calendar – On Fig. 5-37, the yellow block is the date of today. The blue block is the date selected for listing of record files. On May 8th, there were actually 24 files. We just showed a few of them on the list.
2. By hour – As on Fig. 5-39, you can input the time you want and then click “Play File” to get the record files of the date and time selected.

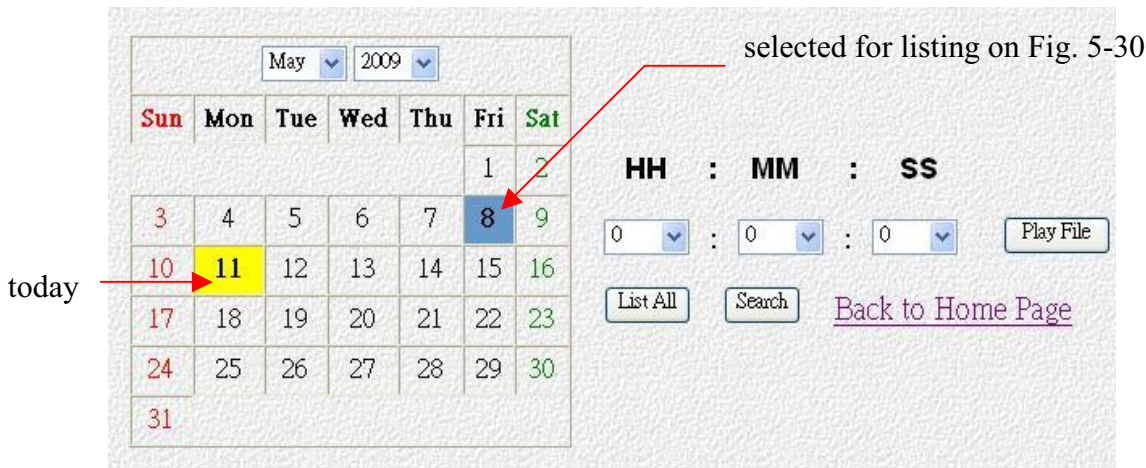


Fig. 5-37

There are 24 files found.

No.	File
1	2009/05/08 23:00:00 798 MB
2	2009/05/08 22:00:00 799 MB
3	2009/05/08 21:00:00 1239 MB
4	2009/05/08 20:00:00 1233 MB
5	2009/05/08 19:00:00 1125 MB
6	2009/05/08 18:00:00 903 MB
7	2009/05/08 17:00:00 642 MB
8	2009/05/08 16:00:00 843 MB

Fig. 5-38

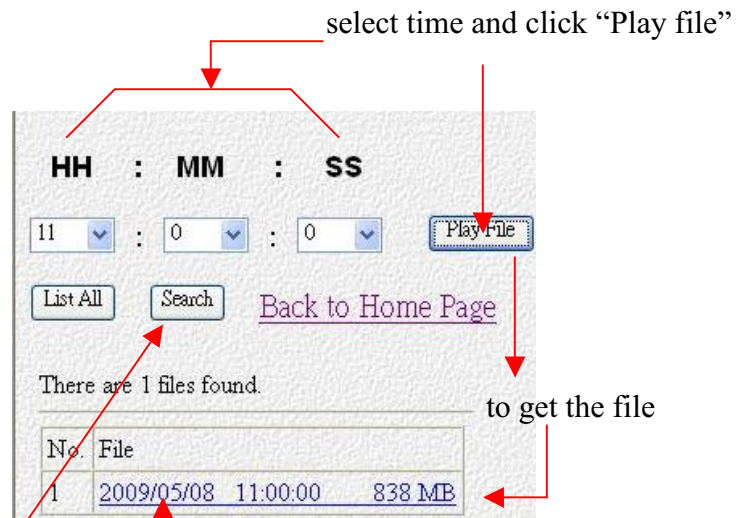


Fig. 5-39

click to bring up Fig. 5-32 click to play

- By search – On Fig. 5-37, click “Search” to bring up Fig. 5-40. You can query by “Start” / “Stop” time or by POS text. The search based on POS text is a kind of “Transaction” search. You can define the starting and ending text strings. There are 3 text fields to input searching strings in a “OR” combination. These features give you “unique” results to find the records contain the videos of what you really want.

After you get the record file list as Fig. 5-38, click the one you want for play back. Fig. 5-41 is the play back screen.

Fig. 5-40

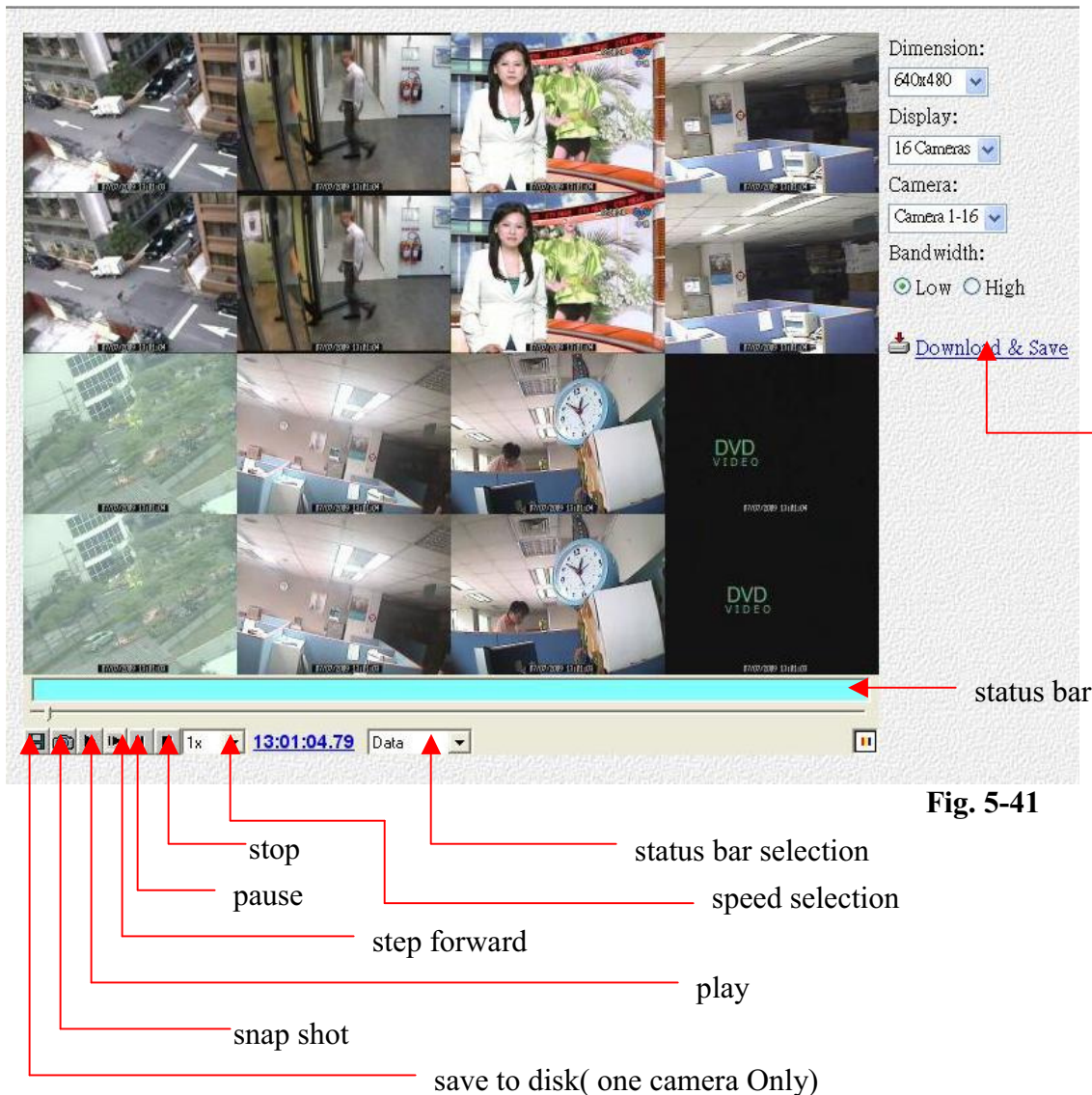



Fig. 5-41

On Fig. 5-41, there are some selections:

1. Dimension – You can select 320x240, 640x480, 800x600, 1024x768 to meet the resolution of your VGA screen.
2. Display – You can select 1/4/8/16 cameras here. This is the number of camera video you want to show on the screen.
3. Camera – Selection here is related to Display. If you set “16 cameras” at “Display”, then, you have on choice here only, “Camera 1-16”. Only when the “Display” filed is set less than 16 cameras, then you have choices here.
4. Bandwidth – Click “Low” or “High” based on your remote connection link speed to AP-5004.
5. Status bar selection – Here you can select “Data”, “Motion”, “GPI” to show different status. On Fig. 5-33, you see this field is selected as “Data” and the status bar is full of “Blue”. That means video data was written continuously within this hour. If you select “Motion”, then, you may get status bar shown up like . You can see the white gaps among yellow color. That means, there was NOT always motion detected. Same thing happens to “GPI” selection.
6. Speed selection – You can select playback speed at 1x/2x/4x/full or 1/2x, 1/4x, 1/8x.
7. Snapshot – When clicked, the screen will pop up camera selection, you then select the camera that you want to do snap shot to save the image. File name of the image is assigned automatically to be “yyyymmddhhmmnss.jpg”
8. Save to disk – When clicked, you can save the video of a particular camera to disk. You need to

select the camera you want. The file name is automatically created as “yyyy_mm_dd_hh_mm_ss.d01”.

9. Download & save – Click here to download the entire recording file for save to disk. You can enter the time slot of interest then click “Download >>>”. File name is default as “IP-yyyymmddhhmmss.d01”. You can change it. The “From” field counts from the beginning of that hour and the “To:” field counts from the start of “From:” field.

Download: 10.11.100.193 2009/05/08 11:00:00 838MB

From: : (m : s)

To: : (m : s)

Save as:

Fig. 5-42

5.13 Configuration File

Here you can back up the system configuration data of AP-5004 to a file or restore the configuration data from a file and upload to AP-5004. This function is good for system configuration back up for multiple machine set up or when abnormal condition occurs, the system manager of AP-5004 can restore previous configured data to the machine.

The operation is straight forward. Select “Backup” and click “Download” to save the configuration data as a file to hard disk. Select “Restore” and choose the file you want for uploading. See Fig. 5-38.

Configuration File

☒ Backup ☐ Restore

Backup

Configuration File.

Restore

Fig. 5-43

5.6.24 Back to home page

The **Back To Home Page** link will redirect you back to the AP-5004 home page.

5.6.25 View video without plug-ins

You can view video even if the machine you are working on does not have the plug-ins necessary for video monitoring. Click the **View Video Without Plug-ins** link to view the video page without plugins. You will need to enter an administrator user name and password to view without plug-ins.

Note: Your browser must be configured to support Java applets to view without plug-ins.

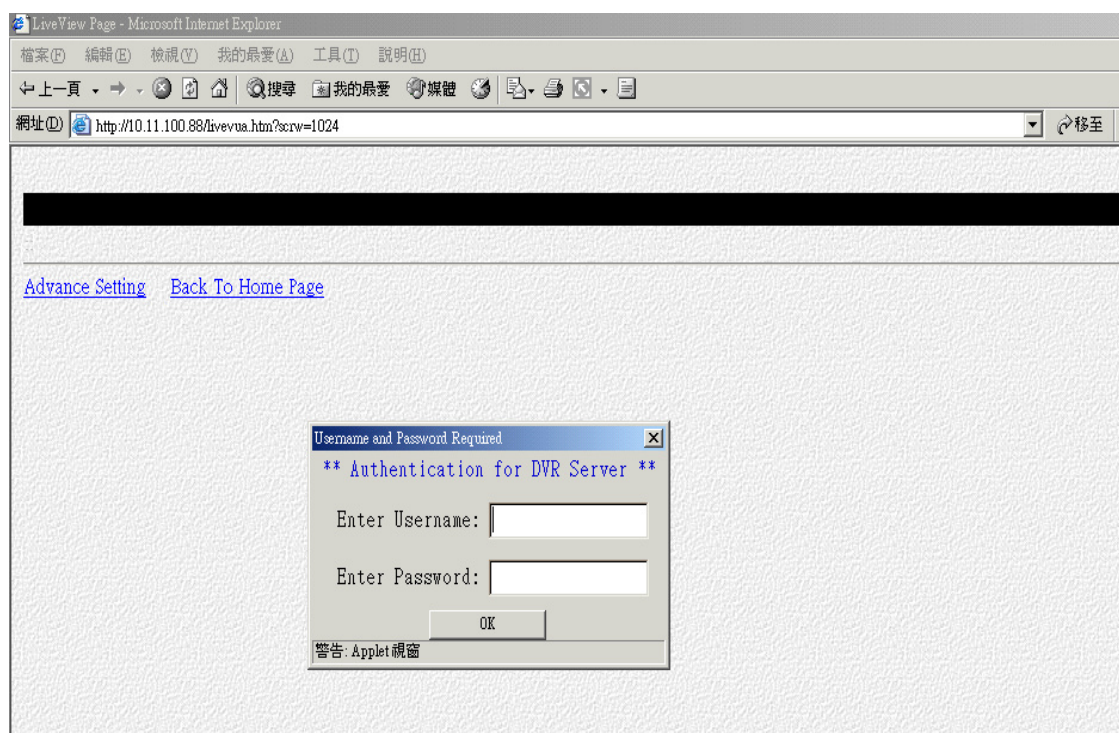


Fig. 5-44

Chapter 6. DCS Plugin Installation Guide v3.0

This DCS plugin will allow us to view remotely APEC DVR's using IE. Uninstall your current DCS, apply the patch to the DVR and after that connect to the DVR using IE. It will download and install the DCS.

Requirements:

- ✧ PC OS: Windows Xp/Vista

Guides:

- ✧ Installation in Windows Vista
- ✧ Installation in Windows XP + IE7

Windows Vista

1. Login to Windows Vista using an **Administrator level** account.
2. **If you have DCS / Secuwatch / Secuwatch Client installed in the PC, please uninstall it first.**
3. Open Internet Explorer and key in the IP of the DVR.



Fig. 6-1

4. It will ask you for the username and password :
5. It will ask you to install the "**dcs.cab**" and click on "Install".

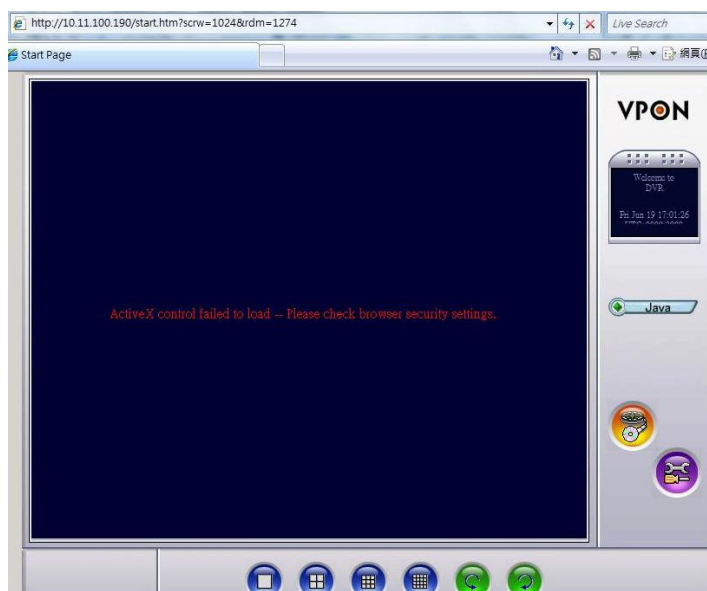


Fig. 6-2

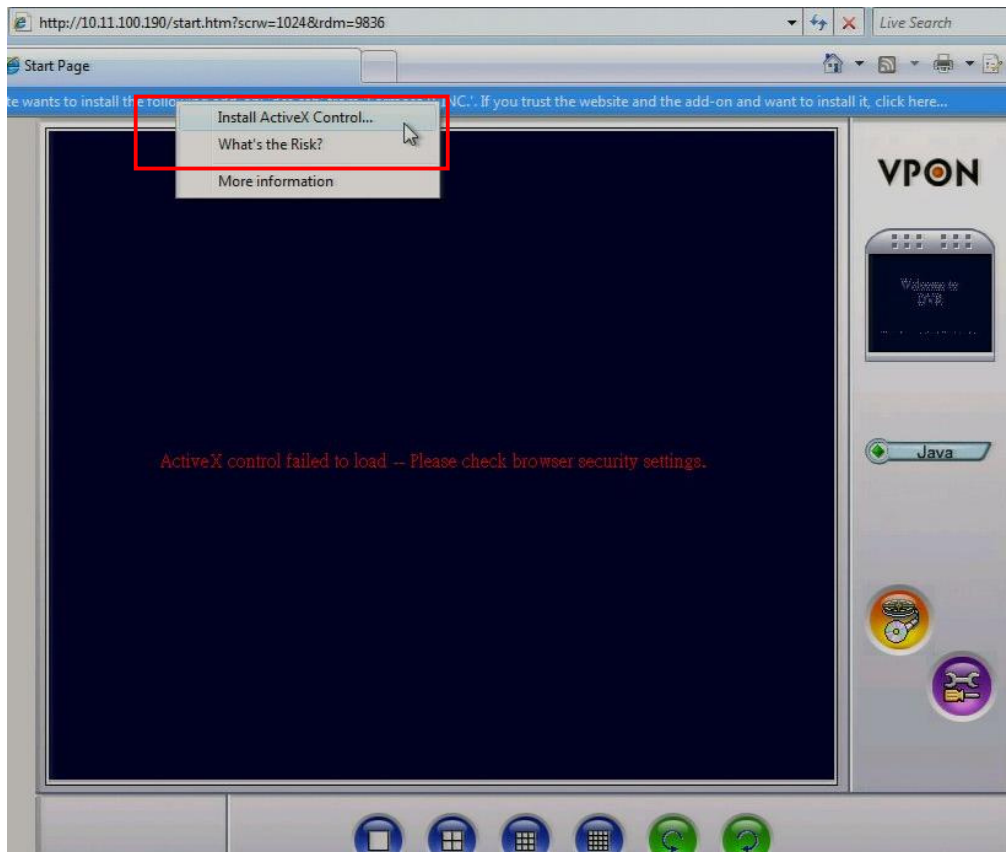


Fig. 6-3



Fig. 6-4

6. The DCS will start to install after downloading the dcs.cab. Please be aware that the download can take a few minutes depending on the bandwidth of your connection to AP-5004 DVR.

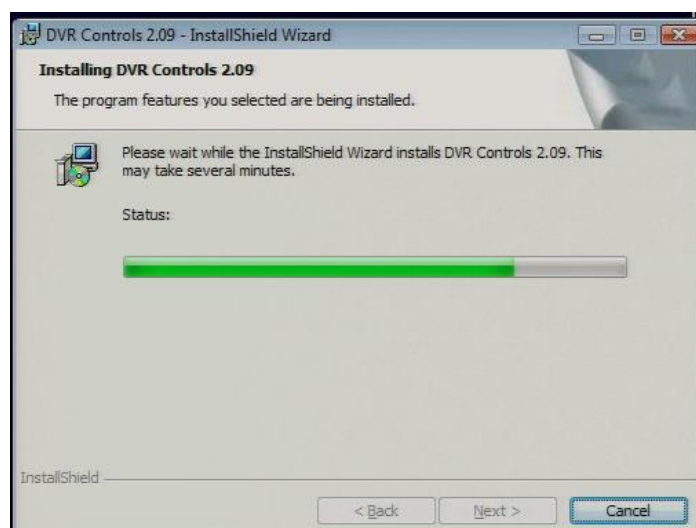


Fig. 6-5

- After the installation, you will be able to access remotely the AP-5004 DVR

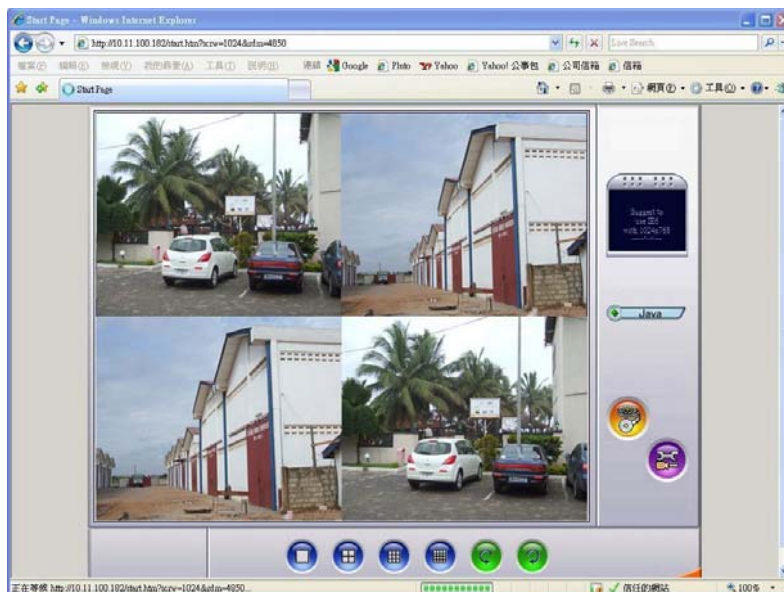


Fig. 6-6

Windows XP + IE7

- Login to Windows XP using a **Administrator level** account.
- If you have **DCS / Secuwatch / Secuwatch Client** installed in the PC, please uninstall it first.
- Open Internet Explorer and key in the IP of the DVR.
- It will ask you for the username and password same thing as **Fig. 6-7**.



Fig. 6-7

- It will ask you to install the "**dcs.cab**" and click on "Install".

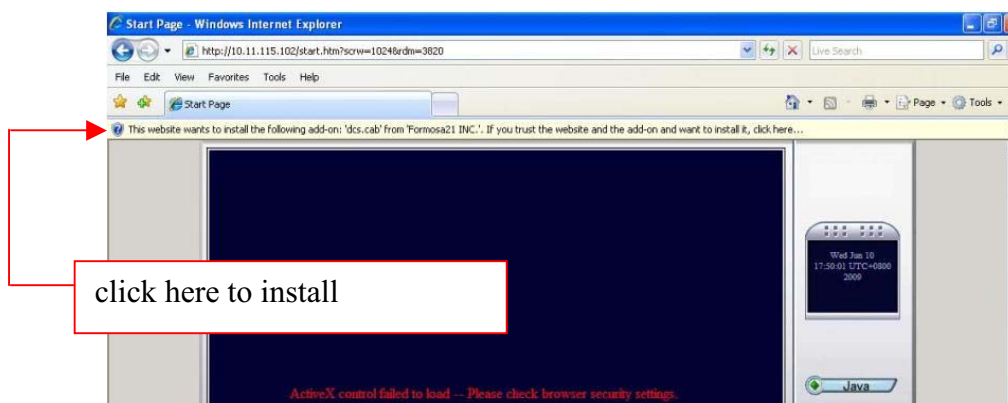


Fig. 6-8

Fig. 7-8

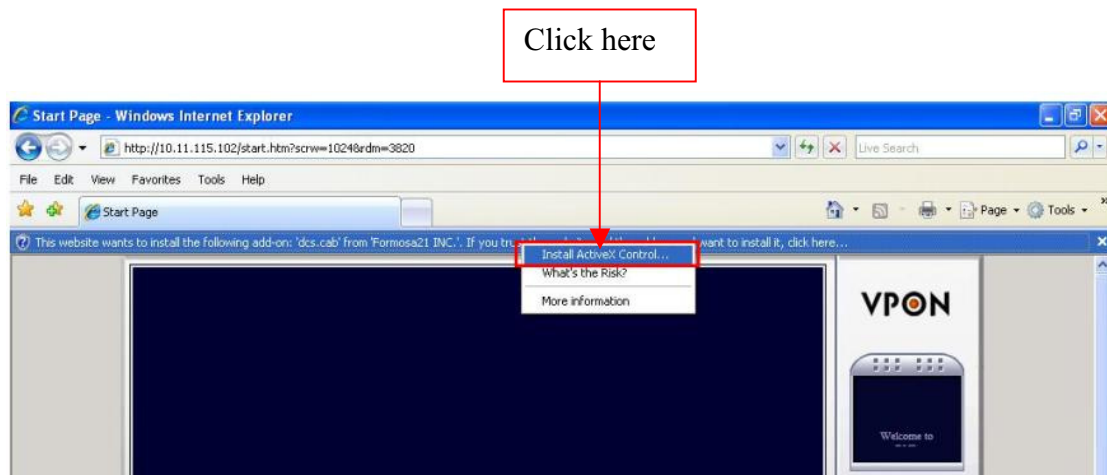


Fig. 6-9



Fig. 6-10

6. The DCS will start to install after downloading the dcs.cab. Please be aware that the download can take a few minutes depending on the bandwidth of your connection to AP-5004 DVR.



Fig. 6-11



Fig. 6-12

7. After the installation, you will be able to access AP-5004 DVR remotely.

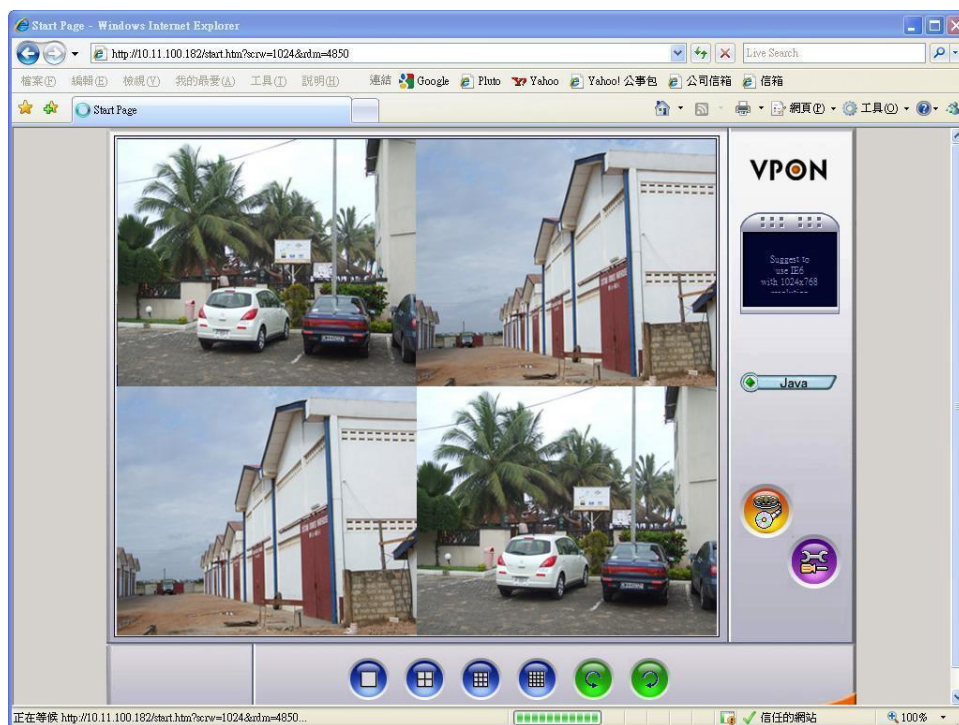


Fig. 6-13

Chapter 7. AP-5004 Mobile DVR 3G / GPS configuration

3G or GPRS communication is important for access AP-5004 mobile DVR from control center because it is difficult to use Wi-Fi while the vehicle is moving. It is helpful to consult the document “3G Basic Knowledge” before proceed to do the configuration.

7.1 Requirements

For AP-5004 to work on 3G / GPS , you need the followings available:

3G USB modem

AP-5004 with FW MDVR 2.x

SIM card with 3G service

GPS USB modem

7.2 USB 3G modem support

Firmware 2.X supports USB 3G modem brand & models as follows:

7.2.1 All Huawei models

7.2.2 ZTE MF620 (aka Onda MH600HS), ZTE MF622 (aka Onda MDC502HS) ZTE MF628,ZTE MF626,ZTE MF628 ,ZTE MF636, ZTE MF638 (aka Onda MDC525UP) ZTE AC8710, ZTE AC2710,ZTE 6535-Z

7.2.3 ONDA MT503HS, ONDA MT505UP

7.2.4 AIKO-83D

7.2.5 Novatel Ovation MC950D,

7.2.6 Merlin XU950D

7.2.7 Ovation 930D

7.2.8 Novatel U727, Novatel U760 ,

7.2.9 Alcatel One Touch X020 (aka OT-X020, aka MBD-100HU, aka Nuton 3.5G), Alcatel One Touch X030 (aka OT-X030, aka Nuton NT36HD), Alcatel X200

7.2.10 Toshiba G450

7.2.11 UTStarcom UM175 (distributor Alltel)

7.2.12 Hummer DTM5731

7.2.13 MobiData MBD-200HU

Among these models, we tested

ZTE-MF626

Huawei E156, E220, E176.

**When apply 3G service to your local telecom company, please make sure it provides :
Public IP**

TCP/IP ports 80 and 4128 are open

Good coverage of 3G, 3.5G and 3.75G

7.3 First step

There are some basic data you need to configure 3G modem. It is easier to install 3G modem on Windows OS to get the configuration data and in the same time, make sure the 3G modem works fine under Windows.

When you buy a 3G modem, it comes with an installation software. Install it on a Windows PC. Following is an example of ZTE MF-626 for reference.

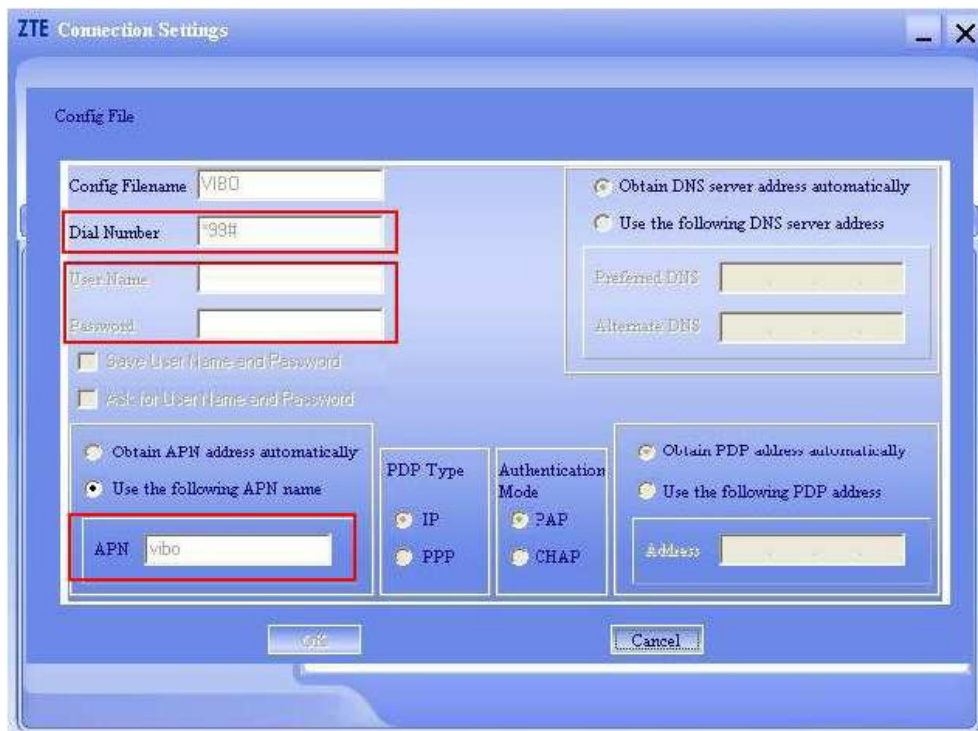


Fig. 7-1

After installed, run the software to get the data of “Dial number”, “User name”, “Password”, and “APN”. If the SIM card uses on the 3G modem has a PIN code, you need to disable it using this software, as **Fig. 7-2**

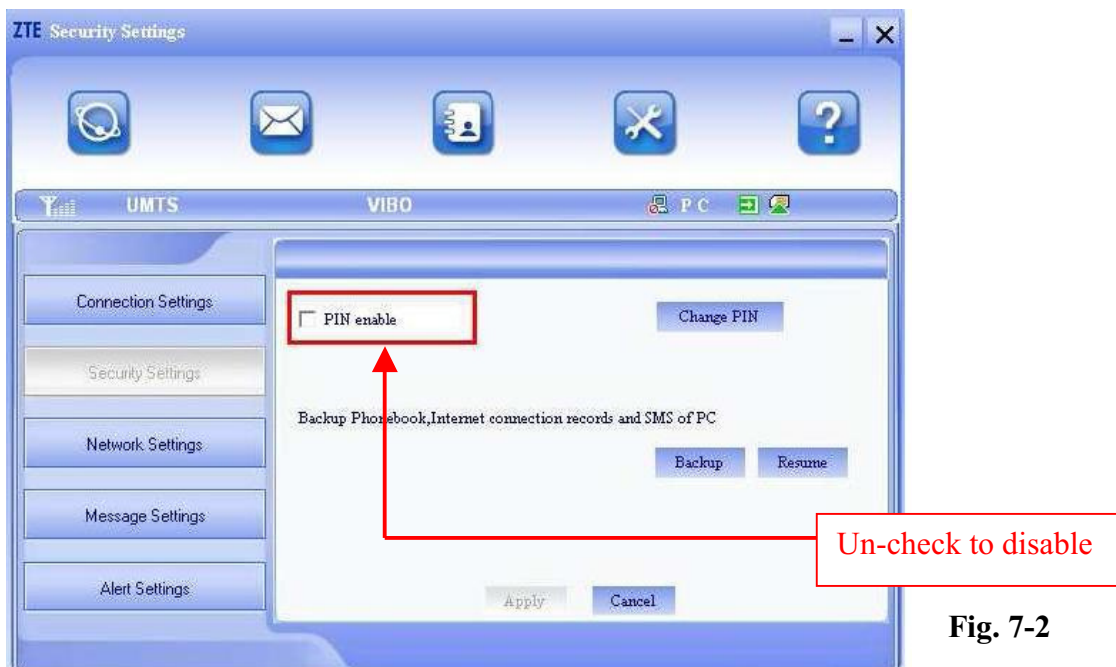


Fig. 7-2

7.4 Configure AP-5004

7.4.1 3G modem

Enter “advanced set up “ -> “system configuration” ->”3G” to get **Fig. 7-3**. Here the “account” & “password” are the “user name” and “password” are provided by your ISP of 3G service. And you can select the brand name & model of 3G modem form the “modem” field, as **Fig. 7-4**.

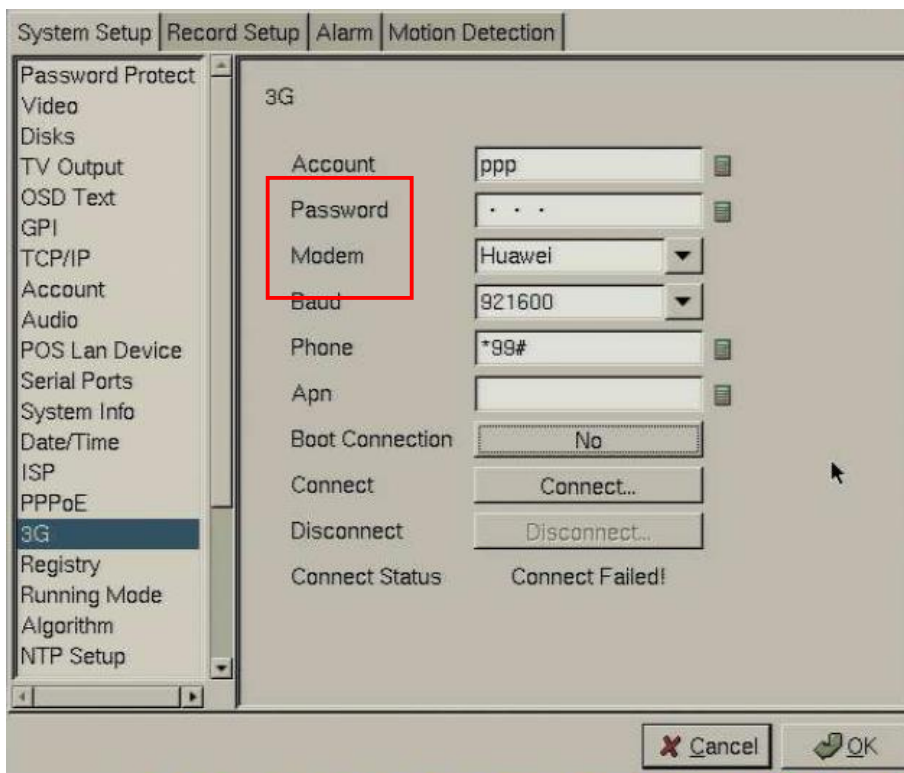


Fig. 7-3

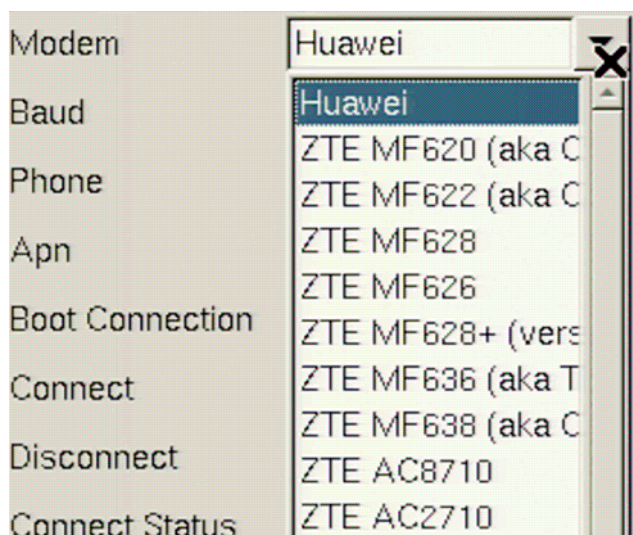


Fig. 7-4

Other fields of Fig. 7-3 are as below:

Baud rate : 921600 by default.

Phone: Phone number to dial. In Taiwan is *99#. It may vary depending on the ISP.

APN: Access Point Name. Provided by ISP. Blank for Taiwan ISP provider.

Boot Connection:

Yes: AP-5004 will try to connect automatically during the startup using 3G modem as configured.

No: It does not connect automatically.

Connect: Click this button to manually start the connection.

Disconnect: Click this button to manually start the disconnection.

Connection Status:

"Connect Failed!": Failed to establish connection.

"Connecting...": Connection in progress.

"Connect OK!": Connection successfully established.

"Disconnecting...": Disconnection in progress.

"Disconnected!": Connection closed.

7.4.2 How to check IP address of AP-5004

Enter “System Setup” and click “System info”, then, you can get **Fig. 7-5** and see the IP address of this AP-5004 there.

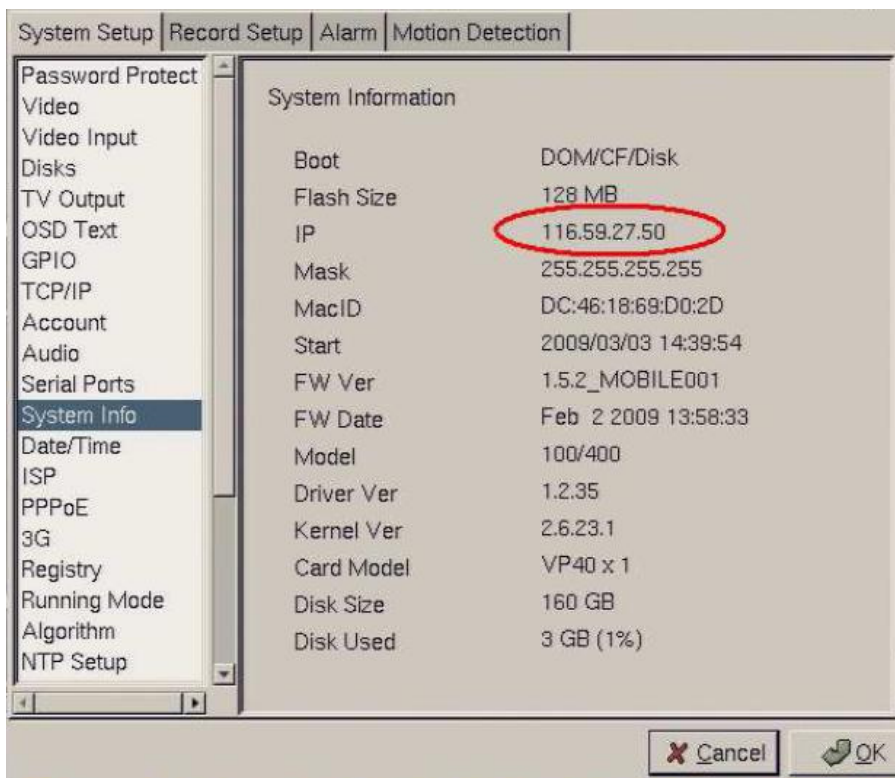


Fig. 7-5

When AP-5004 connects to Internet through 3G modem, the IP address assigned by ISP will be dynamic. You will need to use the “registration” function so that the external world can access it from remote. Please refer to **section 5.6.4** for more detail about using “registry”.

AP-5004 needs reporting to its registry server its IP address every certain minutes and we need to change this value here. Please access AP-5004 through IE browser by issuing <http://IPofDVR/usysvfg.htm>, where “IPofDVR” is the IP address of that AP-5004. **For example :**

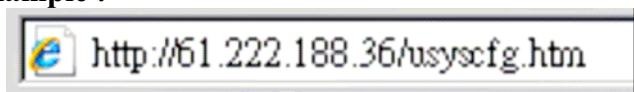


Fig. 7-6

Here “61.222.188.36” is the IP address of APEC demo DVR. Then find the field as below and set it to one(1) minute.

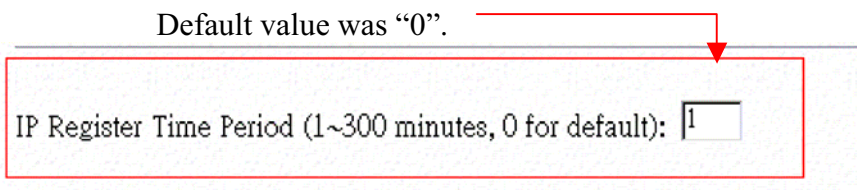


Fig. 7-7

After that, click “submit” to save the change.

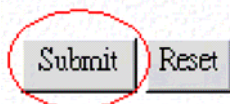


Fig. 7-8

7.5 Important notes when using 3G connection

1. Username & Password blank are supported.
2. Make sure that this 3G provider will give you a public IP with port 80, 4128 are unblocked.
3. Disable the PIN of the Sim card, if it has the PIN blocking enabled. You can do this with the dialing software (for Windows XP) inside the 3G USB Stick.
4. The 3G connection will disconnect the LAN connection.
5. The "LAN" status will become gray as **Fig. 7-9** , if the 3G connection is successful.

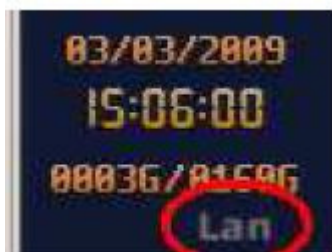


Fig. 7-9

7.6 How to configure GPS

AP-5004 will search for USB GPS modem ONLY when power on start up. Please make sure to insert GPS modem on USB port **before power on AP-5004**.

After AP-5004 boot up into ready, go to "System setup" -> "serial port". and select the correct USB device (normally it is USB1, if not, please try each one of them). It must be "USBx", where x is a number.

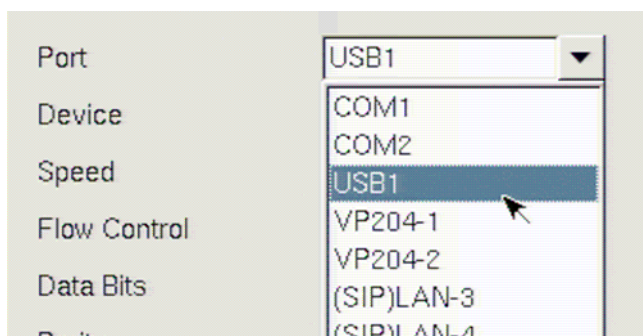


Fig. 7-10

The setting of other fields are :

- 7.6.1 Change "Device" to "Data Capture".
- 7.6.2 Change "Speed" to "4800".
- 7.6.3 Change "Model" to "GPS".
- 7.6.4 Change "Show GPS" to "Yes"

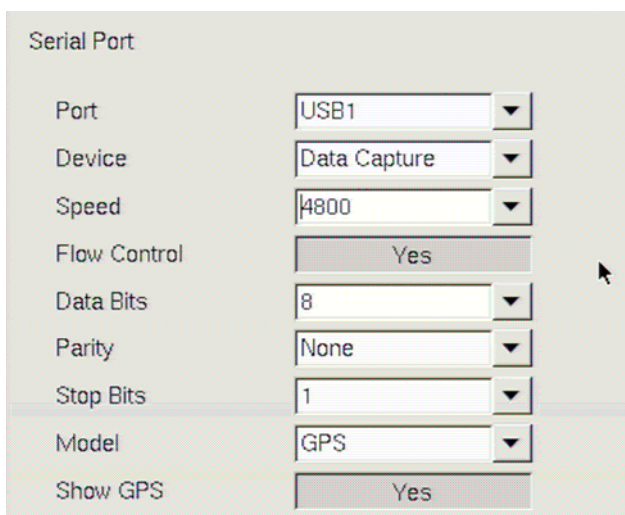


Fig. 7-11

AP-5004 will reboot after you click “OK”. After reboot, if you are at a place that can receive GPS signals, you will be able to see the GPS coordinate text at the bottom left of the video window as **Fig. 7-12**.



Fig. 7-12

7.6.5 GPS USB modem supporting list

Theoretically, all modem that uses Profilic USB-Serial driver is compatible with the firmware of AP-5004. Please connect the GPS USB device to Windows, install the driver that comes with the GPS device and check the "Device Manager". If the GPS device is detected as "Profilic USB-to-Serial Comm Port", as **Fig. 7-13** below, then it should work OK.

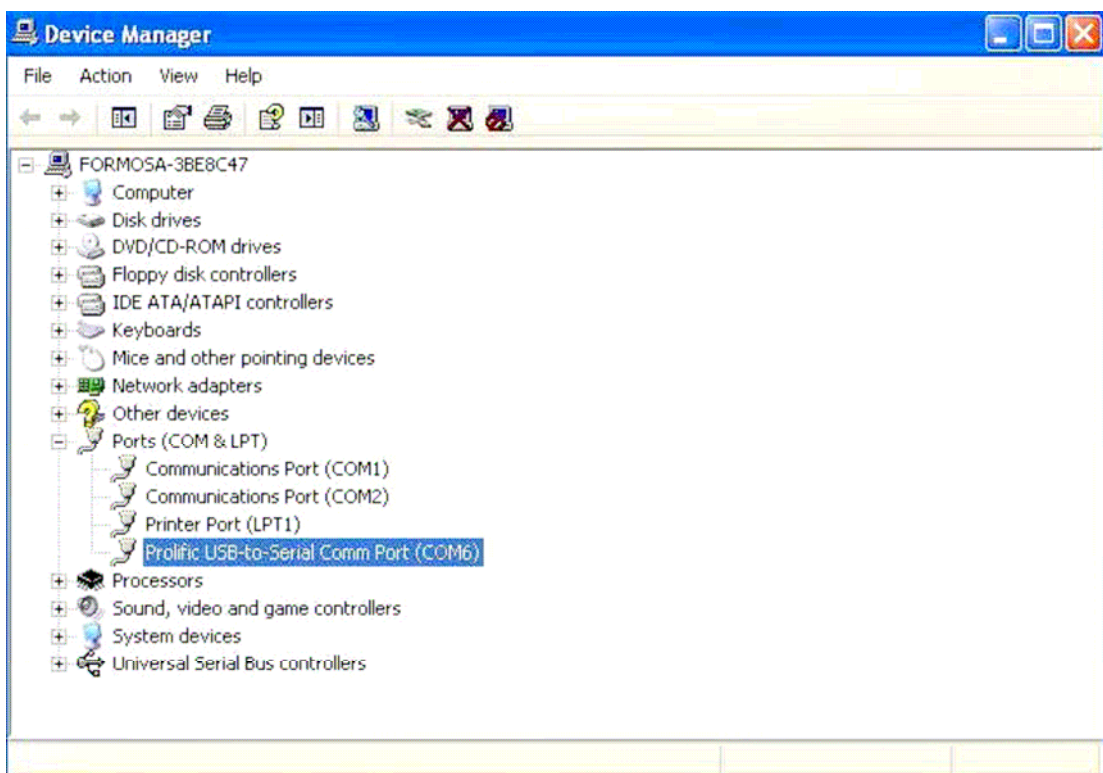


Fig. 7-13

The following models were tested OK:

Globalsat BU-353

Gosget BU-363

Appendix A: Auto re-connect feature

A.1: Auto re-connect process

Following diagram shows 3G re-connect procedure of AP-5004. This feature will be activated ONLY if AP-5004 had connected successfully to 3G before the connection broken.

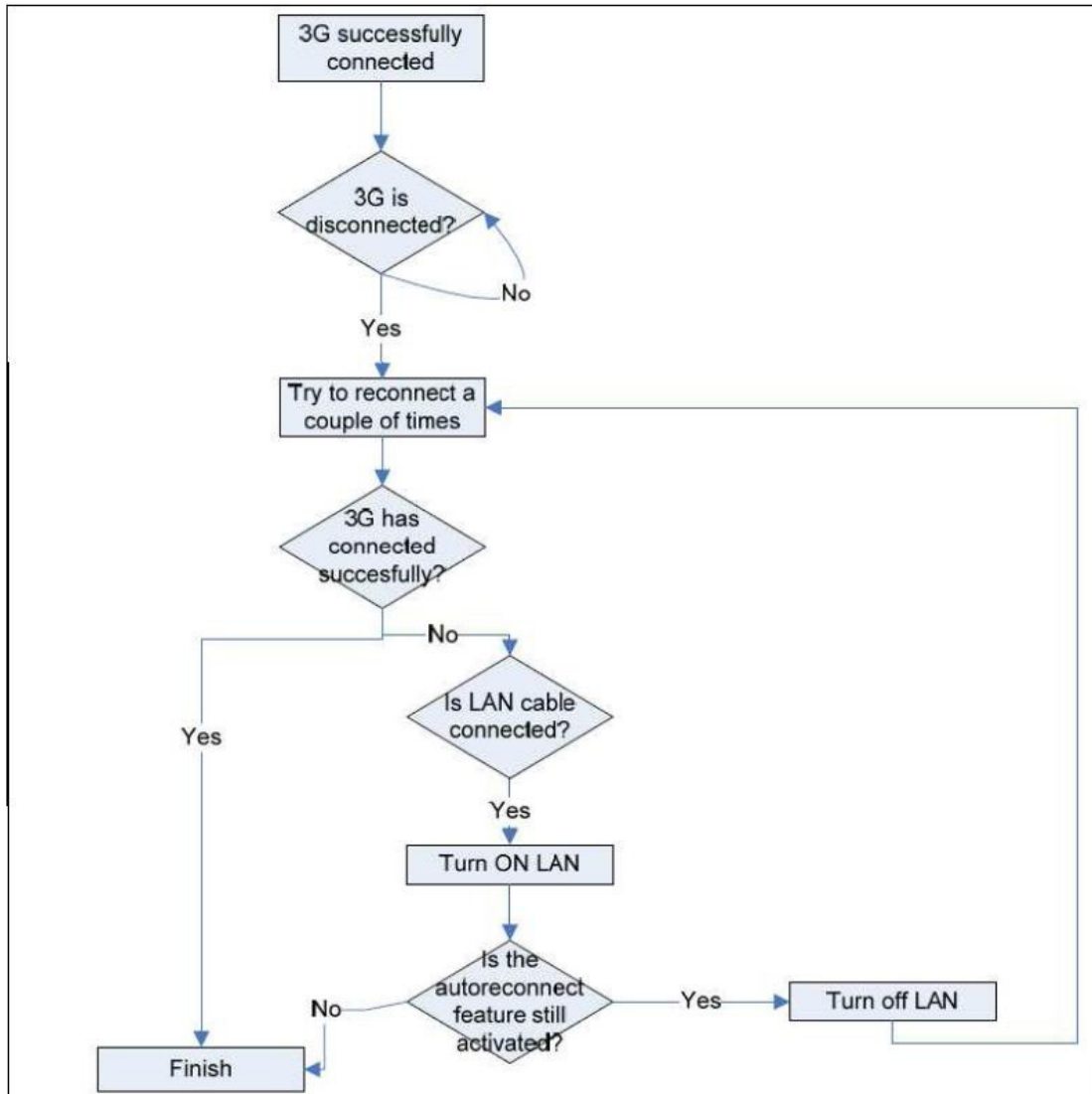


Fig. 7-14

A.2: How to disable auto re-connect feature

When auto-connect feature is activated, and AP-5004 had been connected successfully to 3G, go to "System Setup ", "3G ", to check its status. If "Connect Status " shows "Reconnecting...", as Fig. 7-15, then click on "Connect..." will disable auto re-connect feature at the next cycle of 3G connection.

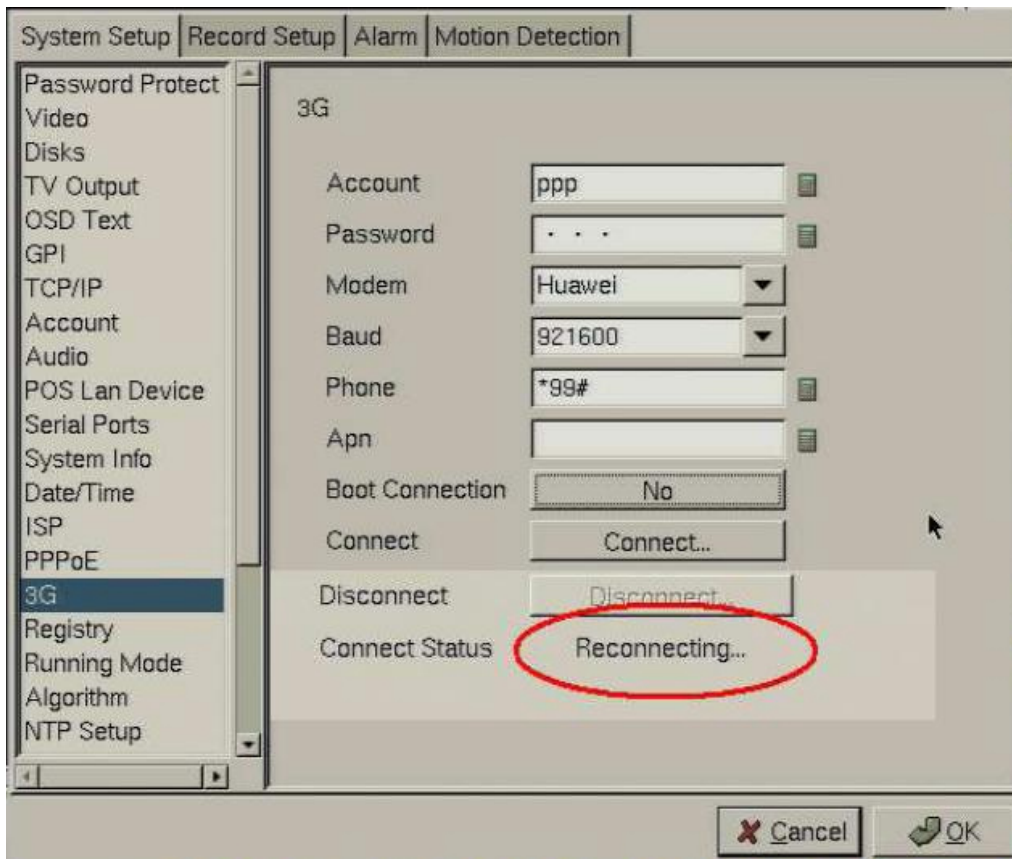


Fig. 7-15

Appendix B. FAQ

Q1: Can't connect to the 3G network!

A1: Please check these following things:

1. Check if the SIM card is inserted correctly.
2. Check if you SIM card has 3G/GPRS/UTMS service and check if your USB modem can support that network service.
3. Check the USB modem model & brand.
4. Please check the username / password / APN / Phone Number. Contact your 3G provider company if you are not sure if these information are correct.
5. The PIN code is disabled? If not, please disable it.
6. Please check if you choose the correct model/brand in "Modem".

Q2: I connected successfully to the 3G network but can't connect remotely using IE.

A2: Please check these following things:

1. Does your 3G network provider provide you with a public IP?
2. Does your 3G network provider block port 80 ?